MINING AND PETROLEUM STANDARD
AND
AMERICAN GAS-LIGHT JOURNAL.

Devoted to Mining, Petroleum, Gas, Water Supply, and Scientific Subjects Generally.

PUBLISHING OFFICE NO. 22 PINE STREET.

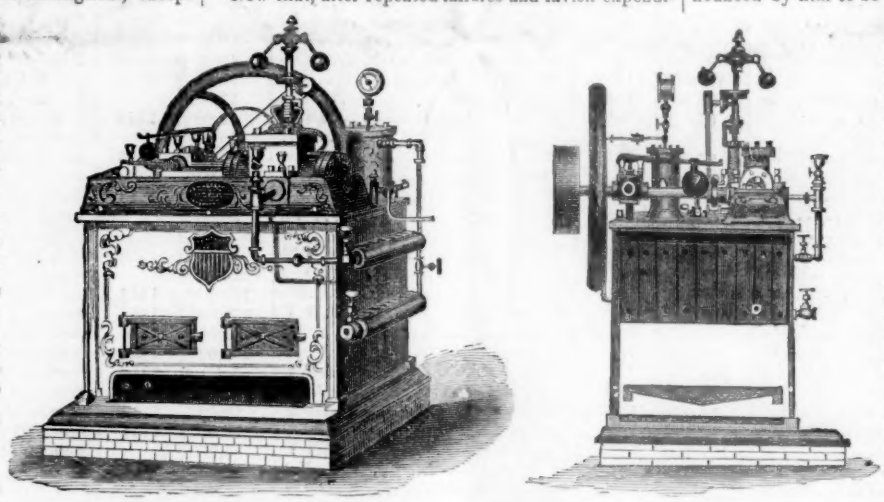
VOLUME VIII—No. 3. } NEW YORK, THURSDAY, AUGUST 2, 1866. { $3 PER ANNUM IN ADVANCE.
WHOLE No. 159. }

Brayton's Patent Steam Generator.

The great importance of perfect safety in steam generation for supplying motive power in a community where so many lives are sacrificed to this fell destroyer—steam explosions—is too apparent to require an argument. But a steam motor we must have to carry on the great industrial, commercial and manufacturing interests of our country until a substitute can be found possessing equal advantages; and although invention is endeavoring to attain this end, nothing has yet been developed to so fully meet all the requirements, viz:—capacity of power, compactness, strength, durability, economy and safety as the engine here illustrated.

The first illustration shows the steam generator, furnace and engine all complete, as it is set up ready for use. The second figure is a sectional view of the same, giving a clear exhibit of the form and situation of the steam generator which the intelligent observer will readily understand. The boiler, or generator, consists of a series of thick, flat, cast iron compartments or tubes, separated from each other throughout, except the water and steam connections at top and bottom. This gives large fire surface and so divides up the boiler or steam generator that the integral parts of the whole cannot be subjected to a strain sufficient to produce a material accident.

The whole is enclosed in an ornamental iron case lined with fire brick or soap stone to prevent radiation, leaving a fire space all around the generator. The engine, including governor, steam gauge and balance-wheel, is secured to the top of the case in a neat and compact form, making the Generator and Engine complete.



BRAYTON'S PATENT STEAM GENERATOR.

These Generators have been in use over three years, and over seventy of them have been built and sold, and are in operation in different parts of the country.

R. A. Hutchinson is general agent for these machines, No. 8 Dey street. Parties desirous of seeing their operation can do so by calling there.

The Mines in Nova Scotia.

The report of Chief Commissioner of Mines of Nova Scotia for the year 1865, abounds in interesting facts and figures from which we make a few extracts; and as we read it over we can but disagree with the *Journal of Applied Chemistry* when it says that "mining is the poorest business in the world," and more decidedly as Nova Scotia does not present the best field for mining operations:

"There are in the Province nine mining districts, and some unproclaimed. from the whole the total amount of gold raised was 4867 oz., 05 dwts., 22 grs. The highest yield per ton was from Stormont district—1 oz, 15 dwts., 15 grs. Stormont, Sherbrooke, Montague and Waverly averaged over 1½ oz. per ton. Mine Harbor, Tangier, Oldham and Renfrew averaged nearly 3-4ths of an oz. The number of mines worked was 93; average number of men employed, 692. The amount of quartz crushed was 23,835 tons; average per man, 34 tons. The average yield per man employed was $664 80. The highest yield of quartz was from Mine Harbor, 16 oz., 10 dwts.; the next highest from Oldham, 50 oz., 17 dwts. The highest average yield per man was at Mine Harbor, the next Waverly, and the third at Sherbrooke. There is another interesting view of the Nova Scotia mines, which is their increasing prosperity.

In 1863 the yield per man was				$0 95	per day.
In 1864	"	"	"	1 39	"
In 1865	"	"	"	2 13	"

This amount of earnings per man would not pay in localities where wages range from $5 to $15 per day, but in Nova Scotia, where the best miners can be hired for $1 25 per day, and the average price is $1, it leaves a profit of $1 13 per day on each man's work.

New plan for Submerged Cables.

Now that, after repeated failures and lavish expenditure of means, the Atlantic Cable is a success, more lines are projected, and it is announced that the Great Eastern is to be purchased for the purpose of laying other lines, which are already found necessary to meet the demand, and reduce the price of dispatches—now fixed at five dollars per word—to a reasonable figure.

It is an established fact that but one line can be laid by the same ships at one time, and consequently the same expense has to be incurred and the same risk of failure to be encountered for each.

In every emergency, or the presentment of any great difficulty, the inventive genius of the human mind seems to come to the rescue. Of this truth we have an additional proof in the improved telegraphic cable invented by A. J. B. DeMorat, a civil engineer, and practical and theoretical chemist, of Philadelphia. Application has been made to patent this invention both in this country and in Europe.

This improved cable claims peculiar and characteristic advantages, making it superior to any other devised. In a section there are six distinct conductors capable of conveying six dispatches or telegrams at a time, and yet the whole was scarcely an inch in diameter. Six different instruments can be applied to each end as readily as to six different wires upon telegraph poles.

This cable is almost as flexible as the best hemp rope of the same size, and its elasticity is so great that it could be stretched one inch to the foot without danger of breaking the connection. Its lightness and strength are remarkable. Should any one of the conductors, by any circumstance, become severed or lose its connection, it in nowise effects or injures the others.

Another remarkable feature of this cable is that all the conductors can be safely guarded and protected from all influence of the earth-currents, which have always affected more or less the transmission of electric fluid, and often have rendered it powerless or insensible.

The advantage of having six or more telegraphic lines in one cable, without adding materially to the cost or size, is one that can be readily appreciated by the capitalist.

It has been shown to Mr. Cyrus W. Field, and pronounced by him to be the most complete cable he has ever seen. It has also received the warmest approval of the leading Professors of the Franklin Institute. An official examination has been made of its merits by a special committee of the above Institution, and their report will be published in a future number of the journal of that Institution.

There is no doubt that this invention will produce quite a revolution in the use of cables for submerged lines, of which there are over fifty now in successful operation. The practical and scientific will give the subject due attention when once it is brought before the public, and its merits will then be duly tested. Should its utility be demonstrated by practical results, we may expect that the next Atlantic Cable will be of this or similar character, and will of itself furnish all the telegraphic facilities required for years to come.

From Colorado.—The Black Hawk *Mining Journal* furnishes the following relative to the progress of the Keith desulphurizing process:

The Keith mill started yesterday afternoon, after large improvements and additions and considerable alterations. There is at last a furnace which is believed to be right. The desulphurized material is blown aloft for burnishing, instead of being carried up by an elevator. The burnishing machinery has been more than doubled in capacity. Four shaking tables have been added to the four in former use, and sheet copper for four more is on the way out. The new upright stack, although not carried to the full height for want of brick, furnishes ample draft. It will probably take a few days to get everything running smoothly, when we expect regular and steady results in gold from the Keith mill.

GAS-LIGHT COMPANIES IN THE UNITED STATES.

When Chartered.	Town and State.	Chartered Capital.
1857	Adrian.....Mich	$ 50,000
1856	Akron.....Ohio	20,000
1845	Albany.....N Y	250,000
1858	Albion.....N Y	30,000
1851	Alexandria.....Va	106,530
1852	Alleghany.....Pa	200,000
1853	Allentown.....Pa	60,000
1857	Alton.....Ill	75,000
1859	Altoona.....Pa	40,000
1859	Amesbury and Salisbury....Mass	30,000
1858	Annapolis.....Md	100,000
1858	Ann Arbor.....Mich	23,000
1858	Astoria.....N Y	20,000
1855	Atlanta.....Ga	50,000
1857	Attleboro'.....Mass	6,000
1850	Auburn.....N Y	80,000
1851	Augusta.....Ga	80,000
1853	Augusta and Hallowell....Maine	84,700
1860	Aurora.....Ind	10,000
1817	Baltimore.....Md	550,000
1852	Bangor.....Maine	120,000
1855	Batavia.....N Y	32,000
1853	Bath.....Maine	65,000
1859	Bath.....N Y	15,000
1861	Battle Creek.....Mich	15,000
1858	Belfast.....Maine	14,000
1856	Bellefont.....Pa	20,000
	Beloit.....Wis	30,000
1854	Bethlehem.....Pa	50,000
1859	Beverly.....Mass	40,000
1853	Binghampton.....N Y	50,000
1859	Birmingham.....Pa	40,000
1855	Bloomington.....Illinois	40,000
1853	Bordentown.....N J	50,000
1822	Boston.....Mass	1,000,000
1859	Brattleboro'.....Vt	21,000
1851	Bridgeport.....Conn	90,000
1857	Bridgeton.....N J	50,000
1856	Bristol.....Pa	30,000
1855	Bristol.....R I	35,000
1859	Brockport.....N Y	25,000
1853	Brookline.....Mass	77,000
1825	Brooklyn.....N Y	2,000,000
	Brownsville.....Pa	
1848	Buffalo.....N Y	600,000
1852	Burlington.....N J	100,000
1853	Burlington.....Vermont	75,000
1859	Burlington.....Iowa	65,000
1861	Calias.....Maine	90,000
1852	Cambridge.....Mass	300,000
1852	Camden.....N J	300,000
1853	Canandaigua.....N Y	50,000
1856	Canton.....Ohio	19,000
1853	Cape Island.....N J	80,000
1860	Carbondale.....Pa	16,000
1855	Carlisle.....Pa	30,000
1856	Catasaqua.....Pa	15,000
1858	Catskill.....N Y	
1857	Chambersburg.....Pa	30,000
1846	Charleston.....S C	723,800
1851	Charlestown.....Mass	200,000
1858	Charlotte.....N C	14,000
1859	Charlotteville.....Vermont	15,000
1851	Chelsea.....Mass	100,000
1856	Chester.....Pa	35,000
1849	Chicago.....Illinois	1,300,000
1857	Chicoyee.....Mass	50,000
1851	Chillicothe.....Ohio	40,000
1841	Cinninnati.....Ohio	1,600,000
1859	Citizens', Brooklyn.....N Y	1,000,000
1860	Citizens', Reading.....Mass	90,000
	Clarksville.....Tenn	100,000
1860	Claremont.....N H	20,000
1846	Cleveland.....Ohio	200,000
1858	Clinton.....Mass	30,000
1859	Clyde.....N Y	10,000
1854	Cohoes.....N Y	50,000
1860	Cold Spring.....N Y	30,000
1860	Cold Water.....Mich	25,000
1852	Columbia.....Pa	37,500
1852	Columbia.....N C	44,000
1857	Columbia.....Cal	50,000
1853	Columbus.....Ga	54,000
1850	Columbus.....Ohio	100,000
1853	Concord.....N H	50,000
1853	Covington and Newport.....Ky	100,000
1854	Cumberland.....Md	60,000
1857	Danbury.....Conn	50,000
1856	Danville.....Pa	30,000
1855	Davenport.....Iowa	56,000
1848	Dayton.....Ohio	50,000
1853	Dedham.....Mass	40,000
1860	Deleware.....Ohio	30,000
1849	Detroit.....Mich	500,000
1860	Dobbs' Ferry.....N Y	25,000
1854	Dorchester.....Mass	150,000
1859	Dover.....Del	$ 12,000
	Dover.....N H	
1857	Doylestown.....Pa	50,000
1854	Dubuque.....Iowa	50,000
1853	East Boston.....Mass	133,000
1858	East Greenwich.....R I	11,200
1861	East Hampton.....Mass	10,000
1861	East New York.....N Y	50,000
1857	Easton.....Md	9,000
1850	Easton.....Pa	125,000
1856	Eastport.....Maine	50,000
1855	Elizabeth.....N J	100,000
	Ellicott's Mills.....Md	10,000
1852	Elmira.....N Y	50,000
1852	Erie.....Pa	68,000
1853	Evansville.....Ind	60,000
	Exeter.....N H	60,000
	Fair Haven.....Conn	20,000
1847	Fall River.....Mass	26,000
1859	Fayetteville.....N C	25,000
	Fifth Ward (Milwaukee).....Wis	50,000
1857	Fishkill.....N Y	10,000
1853	Fitchburg.....Mass	100,000
1859	Flemington.....N J	20,000
1855	Flushing.....N Y	20,000
1858	Folsom.....Ala	
	Fort Wayne.....Ind	40,000
1851	Frankfort.....Ky	50,000
1851	Frederick City.....Md	36,000
1854	Fredericksburg.....Va	72,500
1858	Fredonia (Natural Gas).....N Y	10,000
	Freeport.....Ill	20,000
1850	Fremont.....Ohio	25,000
1858	Fulton.....N Y	12,000
	Galena.....Ill	70,000
1859	Gallon.....Ohio	25,000
1858	Galveston.....Texas	150,000
1854	Gardiner.....Maine	100,000
1853	Geneva.....N Y	75,000
1851	Germantown.....Pa	Merged
1859	Gettysburg.....Pa	20,000
1854	Glenn's Falls.....N Y	35,000
1854	Gloucester.....Mass	40,000
1857	Gloversville.....N Y	15,000
1858	Grand Rapids.....Mich	50,000
1855	Great Barrington.....Mass	5,000
1849	Great Falls.....N H	50,000
1860	Greenfield.....Mass	20,000
1853	Greenpoint.....N Y	100,000
1859	Greensboro'.....N C	12,000
1858	Greensburg.....Pa	30,000
1854	Hagerstown.....Md	15,000
	Hamilton.....Ohio	15,000
1859	Hannibal.....Mo	100,000
1857	Harlem.....N Y	350,000
1855	Harrisburg.....Pa	100,000
1849	Hartford.....Conn	200,000
	Hastings.....N Y	
1853	Haverhill.....Mass	50,000
1859	Haverstraw.....N Y	20,000
1861	Havervill.....Mass	15,000
1859	Hempstead.....N Y	16,000
1862	Hoboken.....N J	100,000
1856	Hollodaysburg.....Penn	30,000
1861	Hollyoke.....Mass	20,000
1861	Homer & Cortland.....N Y	40,000
1854	Honesdale.....Pa	30,000
1860	Hornellsville.....N Y	12,000
1853	Hudson.....N Y	50,000
	Hunter's Point.....N Y	
1857	Huntington.....Pa	18,000
1856	Huntsville.....Ala	7,325
	Indianapolis.....Ind	150,000
1857	Iowa City.....Iowa	40,000
1852	Ithaca.....N Y	75,000
1857	Jackson.....Mich	25,000
	Jackson.....Miss	80,000
	Jackson.....Cal	50,000
	Jacksonville.....Fla	35,000
1858	Jacksonville.....Ind	50,000
1856	Jacksonville.....Mo	25,000
1853	Jamaica.....N Y	20,000
	Jamaica Plain.....Mass	75,000
1856	Jamestown.....N Y	25,000
	Janesville.....Wis	50,000
1853	Jeffersonville.....Md	30,000
1858	Jersey City.....N J	300,000
1856	Jersey Shore.....Pa	15,000
1857	Johnstown.....Pa	80,000
	Joliet.....Ill	300,000
1858	Kalamazoo.....Mich	30,000
1860	Keene.....N Y	60,000
1855	Keokok.....Iowa	$ 100,000
1855	Kingston.....Pa	50,000
1859	Kittanning.....Pa	20,000
1854	Knoxville.....Tenn	63,000
1860	Laconia.....N H	20,000
1859	La Crosse City.....Wis	100,000
1854	Lafayette.....Ind	60,000
1856	Lamperville.....N J	30,000
1849	Lancaster.....Pa	100,000
1856	Lancaster.....Ohio	25,000
1855	Lansinburg.....N Y	25,000
1849	Lawrence.....Mass	200,000
1859	Leavenworth.....Kansas	200,000
1856	Lebanon.....Pa	56,000
1861	Le Roy.....N Y	22,000
1858	Lewisburg.....Pa	20,000
1852	Lewiston.....Maine	100,000
1856	Lewistown.....Pa	30,000
1853	Lexington.....Ky	100,000
1853	Little Falls.....N Y	112,000
1861	Little Rock.....Ark	20,000
1858	Lockhaven.....Pa	28,000
	Lockport.....N Y	100,000
	Logansport.....Ind	40,000
1838	Louisville.....Ky	600,000
1849	Lowell.....Mass	200,000
1852	Lynchburg.....Va	70,000
1852	Lynn.....Mass	55,000
1859	Lyons.....N Y	30,000
1852	Macon.....Ga	75,000
1851	Madison.....Ind	160,000
1855	Madison.....Wis	100,000
1854	Malden & Melrose.....Mass	50,000
1852	Manayunk.....Pa	40,000
1852	Manchester.....N H	100,000
1830	Manhattan (N. Y. City).....N Y	4,000,000
	Mansfield.....Ohio	25,000
1854	Marblehead.....Mass	40,000
	Marlboro'.....Mass	20,000
	Mauch Chunk.....Pa	50,000
1857	Marietta.....Ohio	50,000
1860	Marion.....Ohio	12,000
1858	Marysville.....Cal	50,000
1847	Massilon.....Ohio	20,000
1855	Meadville.....Pa	39,000
	Medina.....N Y	20,000
1852	Memphis.....Tenn	300,000
	Meriden.....Conn	20,000
1859	Metropolitan (N. Y. City).....N Y	1,000,000
1859	Middleboro'.....Mass	15,000
1853	Middletown.....Conn	50,000
	Middletown.....N Y	
	Milford.....Mass	20,000
	Milledgeville.....Ga	100,000
	Milton.....Pa	10,000
1847	Milwaukee.....Wis	400,000
1852	Mobile.....Ala	200,000
1836	Monroe.....Mich	40,000
1852	Montgomery.....Ala	100,000
1856	Montpelier.....Vt	30,000
1859	Morrisania.....N Y	30,000
1859	Morristown.....N J	13,000
1854	Mount Holly.....N J	16,650
	Mount Vernon.....Ohio	50,000
1857	Muscatine.....Iowa	50,000
1854	Nantucket.....Mass	50,000
1852	Nashua.....N H	45,000
1850	Nashville.....Tenn	100,000
1858	Natchez.....Miss	46,000
	Nevada City.....Cal	
1852	New Albany.....Ind	200,000
1846	Newark.....N J	362,000
1856	Newark.....Ohio	30,000
1852	New Bedford.....Mass	130,000
1859	Newbern.....N C	22,000
	New Britain.....Conn	30,000
1851	New Brunswick.....N J	100,000
1852	Newburgh.....N Y	67,000
1852	Newburyport.....Mass	150,000
1857	Newcastle.....Del	32,000
1847	New Haven.....Conn	250,000
1853	New London.....Conn	70,000
1835	New Orleans.....La	1,500,000
1853	Newport.....R I	130,000
1854	Newton & Watertown.....Mass	92,000
	Newton.....N J	30,000
	Newton.....Pa	20,000
	Newtown.....N Y	
1823	New York.....N Y	1,000,000
1859	Niagara Falls.....N Y	15,000
	Norfolk.....Va	60,000
1853	Norristown.....Pa	41,700
1855	North Attleboro'.....Mass	50,000
	Northern Liberties.....Pa	100,000
	North Adams.....Mass	425,000
1856	Northampton.....Mass	35,000

GAS-LIGHT COMPANIES IN THE UNITED STATES.

When Chartered.	Town and State.	Chartered Capital.
1859	North Bridgewater.....Mass	$ 16,000
1856	Norwalk.....Conn	30,000
1859	Norwalk.....Ohio	30,000
1854	Norwich.....Conn	75,000
1861	Norwich.....N Y	12,000
1859	Nyack.....N Y	20,000
1860	Oberlin.....Ohio	10,000
1855	Ogdensburg.....N Y	75,000
1859	Orange.....N J	65,000
1852	Oswego.....N Y	81,000
1855	Ottawa.....Ill	45,000
1856	Owego.....N Y	40,000
1860	Owensboro.....Ky	75,000
1856	Paducah.....Ky	75,000
1861	Painsville.....Ohio	40,000
1856	Palmyra.....N Y	12,000
1847	Paterson.....N J	125 000
1850	Pawtucket.....R I	75,000
1855	Peekskill.....N Y	31,000
1860	Penn Yan.....N Y	12,000
1859	Peoples', Chicago.....Ill	500,000
1855	Peoria.....Ill	100,000
1852	Petersburg.....Va	120,000
1841	Philadelphia.....Pa	3,000,000
1855	Piqua.....Ohio	50,000
1835	Pittsburgh.....Penn	300,000
1854	Pittsfield.....Mass	50,000
1858	Placerville.....Cal	30,000
1860	Plainfield.....N J	25,000
1859	Plattsburg.....N Y	16,000
1853	Plymouth.....Mass	40,000
1860	Port Chester.....N Y	50,000
1860	Port Jervis.....N Y	20,000
1849	Portland.....Maine	300,000
1859	Portland.....Oregon	50,000
1859	Port Lavacca.....Texas	50,000
1851	Portsmouth.....N H	70,000
1855	Portsmouth.....Ohio	50,000
1855	Portsmouth.....Va	100,000
1856	Pottstown.....Pa	20,000
1850	Pottsville.....Pa	110,000
1850	Poughkeepsie.....N Y	84,000
1848	Providence.....R I	1,000,000
1853	Quincy.....Ill	300,000
	Quincy.....Mass	100,000
1855	Racine.....Wis	43,000
1857	Rahway.....N J	50,000
1858	Raleigh.....N C	25,000
1848	Reading.....Pa	100,000
1851	Richmond.....Va	341,975
1859	Richmond.....Mass	40,000
1859	Richmond County.....N Y	
1852	Ripley.....Ohio	25,000
1857	Rochester.....N Y	200,000
1854	Rockford.....Ill	40,000
1854	Rock Island.....Ill	100,000
1852	Rockland.....Maine	50,000
1854	Rome.....N Y	35,000
1854	Rondout and Kingston.....N Y	65,150
1859	Roxbury.....Mass	150,000
	Rutland.....Vt	20,000
	Saco.....Maine	71,600
1857	Sacramento.....Cal	500,000
1859	Sag Harbor.....N Y	20,000
1858	Saint Albans.....Vt	15,000
	Saint Johnsbury.....Vt	30,000
1857	Saint Joseph.....Mo	50,000
1839	Saint Louis.....Mo	600,000
1857	Saint Paul.....Minn	200,000
1856	Salem.....N J	30,000
1850	Salem.....Mass	200,000
1859	Salem.....Ohio	25,000
1859	Salisbury.....N C	14,000
	Salisbury Mills.....Mass	15,000
	Salmon Falls.....Maine	25,000
	San Antonio,.....Texas	73,000
1854	Sandusky,.....Ohio	75,000
1859	Sandwich,.....Mass	10,000
1852	San Francisco,.....Cal	2,000,000
	San Jose,.....Cal	
1853	Saratoga Springs,.....N Y	30,000
	Saugerties,.....N Y	30.000
1849	Savannah.....Ga	200,000
1851	Schenectady,.....N Y	50,000
1858	Scranton, Gas and Water,.....Pa	100,000
1857	Selma,.....Ala	20,000
1856	Seneca Falls and Waterloo,..N Y	80,000
	Shreveport,.....La	40,000
1856	Sing Sing,.....N Y	
	Smyrna.....Del	10,000
1860	South Adams,.....Mass	5,000
1859	South Bridge,.....Mass	200,000
	South Boston,.....Mass	200,000
	Springfield,.....Ohio	75,000
1854	Springfield,.....Ill	75,000
1848	Springfield,.....Mass	100,000
1855	Stamford,.....Conn	6,250
1857	Staten Island,.....N Y	150,000
1858	Staunton,.....Va	18,000
	Steubenville.....Ohio	150,000
	Stockton.....Cal	50,000
1848	Syracuse.....N Y	125,000
	Tamaqua.....Pa	40,000
1859	Tarrytown and Irvington....N Y	70,000
1853	Taunton.....Mass	100,000
	Terre Haute.....Ind	100,000
	Thompsonville.....Conn	25,000
	Tiffin.....Ohio	25,000
1853	Toledo.....Ohio	100,000
1847	Trenton.....N J	100,000
1848	Troy.....N Y	200,000
		30,000
1856	Urbana.....Ohio	80,000
1849	Utica.....N Y	
		66,000
1853	Vicksburg.....Miss	25,000
1859	Vincennes.....Ind	25,000
1863	Virginia City.....Nev	100,000
1858	Walden.....N Y	30,000
1853	Waltham.....Mass	30,000
1857	Ware.....Mass	20,000
1861	Warren.....Ohio	500,000
1854	Warren.....R I	15,000
1855	Washington.....D C	20,000
1859	Washington.....N C	100,000
1848	Wa-hington.....Pa	100,000
1854	Waterbury.....Conn	20,000
1852	Waterford.....N Y	25,000
1852	Watertown.....N Y	30,000
1856	Watertown.....Wis	20,000
1858	Wautome.....Wis	60,000
1857	Waverly.....Miss	100,000
1854	West Cambridge.....Mass	25,000
1852	Westchester.....Pa	20,000
	Westfield.....Mass	50,000
	Weston.....Ohio	100,000
1857	West Point.....N Y	75,000
1853	West Troy.....N Y	20,000
1850	Wheeling.....Va	50,000
	White Plains,.....N Y	1,000,000
1856	Wilkesbarre.....Pa	30,000
1850	Williamsburg.....N Y	70,000
1858	Williamsburg.....Va	12,000
1857	Williamsport.....Pa	60,000
1859	Williamantic.....Conn	200,000
1853	Wilmington.....N C	36,000
1852	Wilmington.....Del	20 000
1854	Winchester.....Va	20,000
1861	Windsor.....Vt	10,000
	Woburn.....Mass	82,000
1856	Woodstock.....Vt	25,000
1853	Woonsocket.....R I	160,000
1856	Wooster.....Ohio	
1849	Worcester.....Mass	
1855	Xenia.....Ohio	40,000
1854	Yonkers.....N Y	100,000
1849	York.....Pa	40,000
	Yorkville.....S C	20,000
1858	Ypsilanti.....Mich	20,000
1850	Yreka.....Cal	30,000
1848	Zanesville.....Ohio	44,000

Gas-Light Companies in the British Provinces of N. A.

When Chartered.	Town and State.	Chartered Capital.
1854	Belleville.....C W	33,000
1854	Brankford.....C W	32,000
	Brockville.....C W	50 000
	Chatham.....N B	50,000
1854	Charlottetown.....P E I	50,000
1857	Cobourg.....C W	30,000
	Dundas.....C W	30,000
	Frederick.....N B	50,000
1843	Halifax.....N S	160,000
1850	Hamilton.....C W	125,000
1848	Kingston.....C W	80,000
1853	London.....C W	100,000
1847	Montreal.....C E	400,000
1854	Ottawa.....C W	40,000
1859	Point Levi.....C E	25,000
1859	Port Hope.....C W	28,000
1847	Quebec.....C E	200,000
1848	St. Catharines.....C W	80,000
1859	St. Hyacinthe.....C E	15,000
	St. John.....N B	179,000
	St. Johns.....N F	50,000
1858	Sorel.....C E	14,000
1848	Toronto.....C W	400,000

Gas-Light Companies in Cuba, Mexico, South America and New Zeland.

When Chartered.	Town and State.	Chartered Capital.
1857	Callao.....Chile	
	Cardenas Cubana.....Cuba	50,000
	Compania.....Havana	500,000
	Cienfuegos, Guanabacoa, Pegla, Trinidad } Cuba	
	Guiness.....Cuba	
	Guyaquil.....S A	150,000
	Havana.....Cuba	2,000,000
	Lima.....Peru	100,000
	Maranham (chartered).....	
	Mantanzas.....Cuba	50,000
	Mexico City.....Mexico	550,000
1854	Monteviedo.....S A	500,000
	Para (chartered).....	
1857	Rio de Janeiro.....S A	1,000,000
	San Iago.....Chile	500,000
	Saint Jago de Cuba.....Cuba	451,000
	Valparaiso.....Chile	500,000
	Vera Cruz.....Mexico	500,000
	Ville Glara.....Cuba	50,000
	Auckland.....N Z	

Gas Companies of which we have not received Date of Charter or Amount of Capital.

Amsterdam,.....N Y	Hollis Springs,.....Miss
Belleville,.....Ill	Johnstown,.....N Y
Balston,.....N Y	Kansas City,.....Kansas
Bucyrus,.....Ohio	La Porte,.....Ind
Canta,.....N Y	Medford,.....Mass
Cooperstown,.....N Y	Middletown.....Pa
Corning,.....N Y	Milton,.....Mass
Citizens', San Fran'co, Cal	Mount Vernon,.....N Y
Danvers,.....Mass	Murfreesboro,.....Tenn
Ellsworth,.....Maine	Naugatuck,.....Conn
East Saganaw,.....Mich	Parkersburg,.....W V
Fondulac,.....Wis	Princeton,.....N J
Georgetown,.....D C	Reading,.....Mass
Genessee,.....N Y	Richmond,.....Ind
Grafton,.....Va	Rockville,.....Conn
Greeneville,.....S C	Rome,.....Ga
Hanover,.....Pa	Salem,.....N C
Henderson,.....Ky	Honolulu.....S Islands

IMPROVED MANUFACTURE OF LUCIFER MATCHES.—M. Gaillard has lately presented to the Academy of Sciences a new process of manufacturing common phosphorus matches. The method consists in reversing the present mode of preparation. Instead of steeping the slips first into sulphur and then into phosphorus, he plunges the matches into phosphorus in the first place and afterwards into the sulphur. This new process is attended with several advantages. One of these is that sulphur is insoluble in water, and that, not being fusible under a temperature of about 128° Fahrenheit, there is no risk of accidental or intentional poisonings of food by these matches, since the sulphur forms an insoluble covering for the phosphorus. Another advantage depends on the hardness of the sulphur coating, which requires more friction than is ordinarily applied for its removal, and the laying bare a portion of the phosphorus. This is calculated to decrease the risk of fires occurring accidentally from the too ready inflammability of the phosphorus as an outer covering for the lucifer match.—*Builder, London.*

[There is nothing new or original in the above method, as the *Builder* has since learned. The thanks of the London Society of Arts were voted to a Mr. C. M. Barker in the year 1845 for the same method, and matches were thus prepared and extensively sold at that time.—EDS.

—The Minister of public works in France has awarded a gold medal of the first class to Albaret & Co., of Liancourt, for the construction of a steam coach to run on ordinary roads. This coach recently descended the hill from Loan to the railway terminus at the rate of five miles an hour, and afterwards ascended the hill in eight minutes with a weight of five tons. The trial was repeated with so much success that it is now ascertained that the steam engine can draw a weight of thirty tons over an ordinary road at the rate of from three to four miles an hour.

A Peat Gas Furnace.

Le Génie Industriel, of June, has engravings and descriptions of furnaces by Mr. Henry Falck, engineer and director of forges at Dannemarie, in which peat is used as the material to make gas; which gas mixed with heated air, somewhat on the principle of Siemens' furnace, is used for smelting and puddling iron, and for glass and other work in which intense heat is required. The product of iron is of superior quality, owing to arrangements for preventing the dust from the fire from reaching the furnace in which the iron is treated; also owing to the absence of sulphur in the fuel. In this respect the fuel is equal to wood charcoal. In glass furnaces the charge is melted in four hours less time than with the fuel formerly used; and the workmen have less labor in regulating the temperature. The success of the application of peat to these uses depends on drying it thoroughly, which is done by the waste heat. The peat is not of the purest quality, but contains from 10 to 20 per cent. of earthy matter. It is thrown into drying chambers, where it is subjected to the action of the gases after they have been used in the furnaces of treatment; and from these furnaces it is dropped into the gas-generating furnace, where it is burned slowly, making carbonic oxyd and hydrogen gases, which go thence to the furnace of treatment, at the mouth of which they mix with jets of heated air, which inflames them and produces intense heat. The air is heated also by waste heat. We cannot give a clear account of this furnace without the engravings; but we recommend an examination of it to those who are studying the capabilities of peat.—*Artizan.*

Gas from ordinary air dried peat when distilled in a retort will be found to carry a greater percentage of hydrogen than gas from coal or wood; it also has a contiderable degree of carbonic oxide, both of which are highly calorific when combined with oxygen.—These facts have already been set forth in volume VII. page 372, and in other paragraphs of articles on peat. The plan of Mr. Falck appears to consist in furnishing the oxygen at such points within the furnace as shall produce the combustion in contact with the fuel, and of course must be with good effect. But the main fact that peat gas is highly heating, and peculiarly adapted to reducing metals, generating steam, glass making, etc., is beyond question.

Plastic Slate Roofing.

This interesting discovery and invention was made known to the world by the Farmers' Club of New York, at their meeting in the latter part of June, 1865, and its importance to our country and the world was earnestly discussed; but the inventor, Wm. L Potter, of Clifton Park, Saratoga county, N. Y., had been carefully experimenting with the material for years, and had demonstrated its utility and practicability.

After suffering many partial failures in compounds of lime in all its various forms and phases—in sand, in granite, in plaster, mineral coal, clay of various kinds, soap stone, coal tar, vegetable tar, asphaltum, etc., in all the proportions and combinations that an intelligent and inventive mind could suggest, for fourteen years: he tried the slate stone, also, in many combinations, before he discovered that nature's law of reconstruction was exceedingly simple, requiring only gluten or other viscous matter to hold the particles in juxtaposition till time and the action of the elements united them.

In 1864, Wm. C. Potter, (son of Wm. L.,) becoming acquainted with its merits, took hold of the matter vigorously, to bring it before the people and let its benefits be disseminated. In 1865 he sought and obtained an association with J. M. Allen, of Fredericktown, Ohio, and J. S. Christie, of Paterson, N. J., and they established their office at 35 Courtlandt street, (now 157 Broadway, room 19,) in June, intending to start the business of selling the material and making roofs.—They had hardly begun to make arrangemsnts when that most benificent association, the Farmers' Club, got hold of the main facts, through the efficiency of Mr. Solon Robinson, and published them, as aforesaid. This brought down from all parts of the United States such an avalanche of applications as fully justified the opinion of tne association as to "the great want of roofing material throughout the world," and convinced the proprietors that no ordinary mode of procedure in this business would meet the demand of the vast multitudes of people seeking shelter for themselves and their property.

THE MATERIALS' AND THEIR ATTRIBUTES.

Slate-stone and coal-tar are too well known to require a description. Associated in geology—perhaps originally combined, an affinity is found to exist, and the slate being pulverised and brought into contact, a *union* is formed which no power can dissolve.

A material—at once cheap and abundant in every civilized country on the globe, so simple in preparation and application that common sense is the only qualification for using it. A mastic—it adapts itself to every shape and condition. Adhesive—it needs no nails or hooks to hold it. Non-combustible—it is not the means of destroying your property, but of protecting it. Impervious—water, nor even steam, can penetrate or dissolve it. Repairable—"a little more of the same sort" and a brush or trowel restores it from accidental injuries. Renewable—the waste from the friction of falling water may be returned once in ten or twenty years forever by the use of the brush. It is, in fact, the only material known of which can be affirmed that it will endure so long as the building endures under it.

The advertisement of this roofing will be found in another part of this paper.

A Petrified Australian.

The London *Daily News* says that a petrified Australian male aboriginal has just arrived in England This singular specimen of petrifactian was found in one of the stone caverns which abound in Mosquito Plains, South Australia. It was lying in a natural position, as if fallen asleep; and a Mr. Craig, who was in the colony at the time in search of curiosities, got possession of the "black fellow" for the purpose of adding him to his collection. Traveling with his singular burden wrapped in a blanket, for nearly one hundred miles, he reached Mount Gambia, where his movements attracted suspicion, and the Crown Lands Ranger ascertaining that his bargain was a human being, sought the advice of a higher power and relieved him of his prize. An action of trover was immediately recommended, and Mr. Craig succeeded in obtaining a verdict with damages one farthing. The Government, however, refused to give up the "stone or other material," which was again placed in the cave. Mr. Craig, however, again went to work, and despite the heavy iron bars with which it was guarded, and the hardships he endured, managed to regain it, and brought it in safety to England.

PRESERVING IRON.—A Parisian physician Dr. de Brion, has announced his discovery, which he has patented, for treating india-rubber, so that when used on iron it assumes the appearance of an enamel paint. It professes to be absolutly proof against the action of the atmosphere, as well as the power of all liquids, including the most potent acids, to affect iron. The preparation is applied cold, and in a liquid state, similar in consistency &c, to common paint generally used for iron work. The coating, when necessary, may be so thin as scarcely to be detected, leaving the protected surfaces sharply defined. It quickly hardens.

AFTER MORE MINES,—The Nevada *Territorial Enterprise* reports that among a party of Montana gold seekers leaving Virginia was no less individual than the immortal Comsiock, the discoverer of the great lead that bears his name—the most valuable mine ever known. The last we heard of Comstock, previously, was that he was opening some rich mines of Idaho, and now that that country is established as of undoubted richness, he is off for further explorations. Such is the nature of the indomitable and adventurious prospectors of the Pacific coast Their character is an anomaly They appear only to to desire to find new mines, sell for a small sum to "capitalists," and then go for more.

Fires in the Oil Regions in One Year.

The *Titusville Herald* gives the following condensed statement of the great fires which have occurred in the Venango oil regions during the past year:

The first fire was owing to the bursting of three wooden tanks belonging to the United States well, on Pithole creek. The accident occurred on the 19th of June, 1865. The tanks contained 3,000 barrels of oil, which ran down the creek and was wantonly set on fire by boys. The well, which was then rated at 900 barrels per day, (an exaggeration), remained uninjured.

The celebrated Grant well, (No. 19) Holmden farm, took fire on the night of the 1st of August. It had been tested in the morning, and was producing between 300 and 400 barrels per day. No tanks had been erected, and the burning oil flowed in every direction. Two persons were burned to death, and seven or eight others were severely injured. After raging seven hours, the fire was quenched by forcing a tin funnel over the orifice of the tubing, conducting the oil to a greater distance, and then trenching the tubing and smothering the flames with dirt.

On Saturday, September 3d, about 10 o'clock A. M., a disastrous fire occurred at Petroleum Centre. It originated at Anderson well, No. 1, communicated to the tanks, which burst and sent their flaming contents to well No. 2, and the oil refinery of Timothy Collins The fire was arrested by building dams across the ravine. It raged with great violence for four hours, and destroyed property to the amount of $11,000. Two men were seriously but not fatally burned.

A fire occurred at the Baker well on Watson Flats, on the night of September 9th, destroying sixty barrels of oil. A boy was slightly burned.

On Tuesday night, September 19th, the once famous Sherman well terminated its career by an accidental conflagration, which destroyed eleven tanks, two engines and engine houses. The well was pumping thirty barrels per day. A "Crocker blower" was subsequently applied, and the production partially restored. Loss by fire, $12,500.

The Grant well, Holmden farm, took fire a second time on the 19th of October, from the explosion of a barrel of crude oil which was being used for fuel at well No 4 on Morey farm. At the time of the fire the production of the Grant well was rated at 1,000 barrels per day. It had seven or eight 1,200 barrel tanks, filled with oil, or counting all together 7,000 barrels of oil. The fire raged nearly eight hours, consuming eight tanks, eleven derricks, engine-houses and engines. The total loss of property was estimated at $86,700, on which there was an insurance of $29,000. No other producing well was burned.

On the 1st of November the engine-house of well No. 136 Morey farm took fire from the supply-pipe of the furnace, and it was destroyed. The well and tanks were saved with difficulty.

The Pennebacker well was burned at Funkville on the night of December 2d. Eight hundred barrels of oil, two engine houses, three large tanks, and four derricks were destroyed. Loss $10,000. The well was flowing 50 barrels per day. It was fully restored.

The old Noble well and buildings adjacent were burned December 6th. Loss $10,000. One man fatally injured.

A horrible accident occurred at the Monitor refinery, Petroleum Centre, on the 20th of December, by the explosion of a condenser. Four men were very seriously burned, one fatally. Loss about $2,000.

On the 11th of January the Pennebacker well at Funkville was burned a second time, together with Nos. 1 and 2 Jenkins, consuming three derricks and engine-houses, three tanks, and 1,200 barrels of oil. Loss $10,000.

The first fire on Bennehoff run occurred on the 30th of January, and resulted in the destruction of 11,550 barrels of oil, valued at $57,750, and $30,000 worth of tanks, derricks, engines and machinery, making a total loss of $87,750. The fire ignited from the sparks of a smoke stack. At one period the flames reached the iron tank of the Central Petroleum Company, contain-

ing 2,800 barrels, but it was unharmed. The fire was extinguished after four hours duration.

On the 22d of March a very destructive fire occurred on the Stevenson farm, caused by the bursting of one of the Ocean Company's tanks, the oil running down the ravine and communicating with a furnace, where it took fire. The refineries of Parker, Baker, Ferris & Co., and Prindle & Finner, besides the houses and machinery of half a dozen oil companies, and a large amount of oil. The loss exceeded $20,000.

On the 31st of March, occurred the great fire on the Hyde and Egbert farm, opposite Petroleum Centre. Eighteen wells and 20,000 barrels of oil were burned. Twenty-five acres of oil lands were literally covered with liquid fire during the progress of the conflagration. The loss of property approximated $200,000. The fire originated at the supply pipe which fed the furnace of the Burlington well.

On the 6th of April the oil refinery of Van Horne & Co., on the Holmden farm was destroyed, with a small quantity of oil. Loss $6,000. Accidental.

On the 18th of April an incendiary mob fired Henry Harley & Co.'s tanks at Shaffer. The burning oil ran down to the railroad track, and consumed four tank cars belonging to Doane & Co. The loss was about $10,000. Fully insured.

A few days afterwards the operation was repeated by the same mob, numbering one hundred men, who fired upon the guards, and then set fire to the tanks. The pipes of the company were then transporting about 2,000 barrels per day. There was but little oil in the tanks, and the loss did not exceed $8,000.

The first fire on Pioneer run occurred on the 19th of May, and resulted in the destruction of seven producing wells, one refinery, 3,400 barrels of oil, and a vast amount of tankage and machinery. The loss was estimated at $80,000. The fire was extinguished by damming the oil current, and then passing it through a line of tubing to a remoter point

The disastrous fire on Bennehoff run completes the list. The total losses from the destruction of oil by fire within the last twelve months will scarcely fall short of *one million dollars*, which would build over 1,500,000 barrels of iron tankage, sufficient for fireproof storage of six months' production of the Venango oil region.

From Tennessee.—It is stated that oil has been struck in Overton, Tenn, on the north line of that State, about midway between its eastern and western border, eighteen miles from the Cumberland Mountains. Already three wells are pumping, three more being bored, and four others started. The Newman well, only thirty-eight feet deep, yields ten barrels of heavy lubricating oil per hour. Another, only twenty-three feet deep, yields to a hand pump fifty barrels per day. The country is mountaneous, the roads bad, and a railroad to the Cumberland indispensable, The location is about fifty miles E. N. E. of Nashville.

Georgia Gold.—Some children playing near Augusta, Georgia, on the 2d, found a lump of gold weighing eleven ounces, in a ravine, and several smaller lumps were picked up in the vicinity. On the 3d three more lumps, weighing respectively thirteen, nine and eight ounces, were found in the same place by the owner of the land. They are perfectly solid, and pure gold throughout. Regular diggings have commenced. Ten thousand dollars have been offered for one acre and refused. The affair creates much excitement.

Ozone Anticholeraic.—Mr. Hay has noted that ozone always exists in abundance in telegraph offices, and to this fact he attributes the immunity from the cholera and contagious fevers which the clerks of those offices enjoy, as he himself remarked while professionally engaged on the telegraph lines west of the Ohio in 1849-54, when the cholera overran nearly the whole of the American Continent.

—The gold fields of Georgia are beginning to attract attention. A letter from Dalton states that the company took out in a single day over $10,000.

PATENT CLAIMS.

Pertaining to Gas, Mining, Petroleum, Water, etc.

For the two weeks ending July 17.

56,179—Purifying Petroleum, etc.—Pobt. A. Cheesebrough, New York City.

I claim the heating of bone-black by dry steam or otherwise, previous to using the same for filtering hydro-carbon oils.

56,204—Gas Heater.—Charles Geisse, Taycheedah, Wisconsin.

I claim, 1st, The combination and arrangement of the central tube, D, with the heater, C, substantially in the manner described and for the purposes set forth.

2d, The combination of the moveable branch-pipe, E, with the heater, C, for starting the generation of gas in the latter substantially as described.

3d, The combination and arrangement of the globular radiator, F, with the central tube, D, of the heater, C, substantially in the manner described.

4th, The combination of the conical mouth-piece, a, with the branch-pipe, B, when constructed and arranged to operate in relation to the heater, C, substantially as described.

5th, Constructing the central tube, D, with cog-teeth as represented, when used in connection with a pinion for elevating and depressing said tube, substantially as described and for the purposes specified.

56,240—Automatic Gas Cock.—Charles MacRae, New York City.

I claim, 1st, Operating an ordinary gas cock by means of a spring, or its equivalent, applied directly to the cock, substantially as and for the purposes set forth.

2d, In connection with a gas cock operated as above described, I claim the stop-wheel, G, and pawl, f, so arranged as to be released by the movements of the clock-work, substantially as herein described.

3d, In combination with a gas cock operated as described, I claim the hands, b and c, arranged to operate as and for the purpose set forth.

4th, The stationary dial provided with the two graduated circles in combination with the hands, b and c, when said parts are arranged to operate in connection with a gas cock, operated as herein described.

56,276—Distilling Petroleum.—Wm. H. Sangster and Theodore C. Spencer, Buffalo, N. Y.

We claim, 1st, The combination of the tank, Fig. 2, or its equivalent the tube, C, and faucet, E, with a still for distilling petroleum, when constructed as and for the purposes herein substantially set forth.

2d, The method herein described of condensing the vapor of petroleum by passing it directly through the water.

56,351—Marine Car.—A. Blomquest, New York City, and C. Crook, Yonkers, N. Y.

We claim the arrangement of the drums, B, B, C, and paddle, D, in combination with the platform, A, constructed and operating in the manner and for the purpose herein specified.

56,378—Apparatus for Treating Ores.—J. C. Coult and J. Roach, San Francisco, Cal.:

We claim, 1st, the Pipe, C, connecting with a furnace and having a wide opening entering the condenser, E, thereby imparting a greater distribution of the fumes as they enter said condenser or water-tank, and equally spreading the fumes over the water, substantially as described and for the purposes set forth.

2d, The tank, E, with an inclined bottom, and the partitions, b. b. b., in the inverted tank or cover of the same, and the adjusting screws, F. F, attached thereto, substantially as described, and for the purposes set forth.

3d, The perforated diaphragm, G, having sufficient openings to equal the openings of the pipe C, where it enters the condenser, E, as before stated, likewise the water bottom, G, and G, over which the fumes collect and are drawn into a fan or pump, also giving a water-bottom, H, to the fan or pump, thereby bringing the fumes again in contact with the water for a long distance and extracting all that it may be desirable to collect before allowing an escape into the chimney, substantially as described and for the purposes set forth.

56,480.—Ore and Timber Car for Mines.—George Williams, Sterling Terry, Colorado:

I claim, 1st, The construction of the doors with a wider portion b, to adapt them to be supported by the sides of the car, substantially as described.

2d, A car constructed with end doors adapted to be folded over the top, for the purpose of converting it into a timber car.

3d, In combination with the above a trigger, C, provided with an inward projection adapted to be tripped by the post, D.

56,487.—Quartz Mill.—Smith W. Bullock, Elizabeth, N. J., assignor to The Bullock Ore Dressing Machine Company, New York City. Ante-dated July 3d, 1866.

I claim, 1st, The combination of the rotating-trough, D, with the crushing wheels G. G., and gear wheels, E. and F, so as to govern the rotary motion of the trough whilst its vertical action is independent of and disconnected from the gear wheels.

2d, The application of springs to the adjustable bed, so arranged as to form a binding link or tie between the supports of the crushing wheels, G, G, and the supports of the trough, D, each of the several features being and operating substantially as and for the purposes herein set forth.

56,490.—Screen for Gas Purifiers.—Edward Duffee, assignor to himself and George A. Kimball, Haverhill, Mass.:

I claim constructing the screens for dry coal gas-purifiers of strips of thin wood crossing each other, and either rivetted together or interlaced in the form of basket-work, supported by a frame-work of metal or its equivalent.

56,503.—Apparatus for carburetting Gas.—William M. Wright, assignor to himself and James E. Pilkington, Baltimore, Md.:

I claim the use of division plates covered with cloth, or its equivalent material, with their openings, notches, and adjustments in an inclosed box, so as to form a continuous air-tight chamber when the lower part of the box is charged with a fluid, as and for the purpose described.

I claim the use of the flat tube, or its equivalent arrangement, for preventing the heavier portions of the fluid hydro-carbon from remaining at the bottom of the box, thereby securing a uniform volatility from all the fluid that is consumed, as and for the purpose described.

I also claim a combination of division plates, openings, notches, cloth coverings and flat tube, in an enclosed box, substantially as and for the purpose described.

Discoveries of the last Fifty Years.

This is an age, among other things, of discovery. The human intellect has employed itself upon scientific investigation, within the last fifty years, with wonderful energy and success. Among the discoveries of the last century are:

The steamboat.—Fulton launched the first one in 1807. Now there are over three thousand steamboats traversing the waters of America. Nearly all the rivers in the world are traversed by steamboats.

Magnetic Telegraph.—In 1800 it took weeks to convey intelligence between Philadelphia and New Orleans, now it can be done in as many minutes by the electric telegraph, which only had its beginning in 1843.

Voltaism was discovered in March, 1800.

The electro-magnet was discovered in 1821.

Electrotyping was discovered only a few years ago.

Hoe's printing press, capable of printing 20,000 copies an hour, is a very recent discovery, but of most important character.

Gaslight was unknown in 1800, now every city and town of pretense is lighted with it.

M. Daguerre communicated to the world his most beautiful invention in 1839.

Chloroform is also of recent discovery.

Astronomy has added a large number of new planets to the solar system.

Mineral Products of Nevada County for 1866.—A correspondent furnishes the Nevada *Gazette* with the following estimate of the gold product from quartz mines in that county for the present year:

Grass Valley Township	$3,000,000
Nevada Township,	1,000,000
Other localities,	500,000
Cement Mining,	500,000
Placer Mining,	4,000,000
Total	$9,000,000

The *Gazette* appears to think the above estimate not overstated. The item of cement mining we presume is set down as the product of the cement crushing mills, while the gold taken out of the hydraulic diggings, which accompany the cement, is set down as placer mining.

☞ For interesting miscellany see last page.

MORRIS, TASKER & CO,

PASCAL IRON WORKS

[ESTABLISHED 1821,]

PHILADELPHIA,

Manufacture Wrought Iron Welded Tubes for Gas, Steam or Water; Lap-Welded Boiler Flues, GALVANIZED WROUGHT IRON TUBES,

ARTESIAN WELL PIPES,

of Wrought or Cast-Iron, screwed together, flush inside and out; Gas-works Castings, Retorts and Bench Castings for Coal Gas-works,; Cast-Iron Street Mains, Bends, Branches, Drips, &c.

Gas and Steam Fitters' Tools, &c.

STEPHEN MORRIS,
THOMAS S. TASKER,
CHAS. WHEELER,
STEPHEN M. P. TASKER.

J. VAUGHAN MERRICK, W. H. MERRICK,
JOHN E. COPE.

SOUTHWARK FOUNDRY,

FIFTH & WASHINGTON STREETS,

PHILADELPHIA.

MERRICK & SONS, Engineers,

MANUFACTURERS OF EVERY DESCRIPTION OF GAS MACHINERY.

Retorts, Bench Castings, Condensers, Washers Surubbers, Wet or Dry Lime Purifiers, Coke Wag ons, Fire Tools, Wrought Iron Grate Bars, Gas holders, either Telescopic or Single, with Sus pension Frames complete; Wrought Iron Roo Frames, for Iron or Slate; Stop Cocks, Exhaust ers, Steam Pumps, Boilers and Tanks, Steam o Hand Air Pumps for providing Street Mains Centre Seals, Governors, Wrought or Cast-Iron Line Sieves for Purifiers, Purifier Hoisting Ma chines, &c., &c.

Address— MERRICK & SONS,
5th and Washington Stts, Philadelphia.

S. FULTON & CO.,

(Successors to Colwell & Co..)

Manufacturers of

PIG IRON & CAST IRON GAS & WATER PIPES.

Also, Heavy & Light Castings of every descrip tion, No. 207 North Water street and 206 North Wharves. Philadelphia.

SAMUEL FULTON, THEO. TREWENDT

TO GAS COMPANIES.

THE UNDERSIGNED DESIRES TO undertake the supervision of sev eral small Gas-works, to visit and examine them as often as may be necessary; to obtain and in spect their coal, castings, fire-brick, and other materials; and to manage their general business in such a manner that they shall be under such supervision as is now attainable in large works, at much increased cost. Also, to advise as gen eral Consulting Engineer and expert in practical chemistry.

CHAS. M. CRESSON,
Late Asst. Engineer of the Philadelphia Gas-works
417 Walnut st., Philadelphia.

POOLE & HUNT,
BALTIMORE, MD.,
are prepared to execute orders for
GAS-HOLDERS,
IRON-ROOF FRAMING,
And other descriptions of
Iron Work for Gas-Works, Water-Pipes, and Heavy Castings, and Machinery generally.

GEO. H. KITCHEN & CO.,

NEW PATENT

GAS APPARATUS

For Country Residences, Public Buildings, &c.,

FROM $300 UPWARDS.

EVERY DESCRIPTION OF GAS FIXTURES.

Gas Fitting in all its branches

561 Broadway,
NEW YORK

Great Improvement
IN
Sewing Machines.
EMPIRE
SHUTTLE MACHINE!

Patented February 14th, 1860.

Salesroom, 536 Broadway.

This Machine is constructed on entirely new principles of mechanism, possessing many rare and valuable improvements, having been ex amined by the most profound experts, and pro nounced to be SIMPLICITY and PERFECTION COMBINED.

It has a straight needle, perpendicular action, makes the LOCK or SHUTTLE STITCH, which will NEITHER RIP nor RAVEL, and is alike on both sides; performs perfect sewing on every de scription of material, from Leather o the finest Nansook Muslin, with cotton, linen, or silk thread, from the coarsest to the finest numbert.

Having neither CAM nor COG WHEEL, and the least possible friction, it runs as smooth as glass, and is

Emphatically a Noiseless Machine!

PRICE OF MACHINES,

COMPLETE:

No. 1, Family Machine, with Hemmer, Feller, Gauge, Braider, & Corder, com plete. - - - $60
No. 2 Small Manufacturing, with Extension Table, $75
No. 3. Large Manufacturing, with Extension Table, $85
No 3. Large Manufacturing, for Leather, with Rol ling Foot and Oil Cup, 100

One-half hour's instructions is sufficient to enable any person to work this Machine to their entire satisfaction.

Agents Wanted in all Towns in the United States, where Agents are not already established. Also, for Cuba, Mexico, Central and South America, to whom a liberal discount will be given Terms, invariably CASH on delivery.

T. J. McARTHUR & CO.,
536 Broadway.

GAS-BURNERS.

W. W. WINCHESTER,

IMPORTER AND

SOLE AGENT

For the United States and Canada, of

SCHWARZ'S

GERMAN LAVA GAS-TIPS

And proprietor of Winchester's Improved

LAVA TIP GAS BURNERS,

No. 144 State Street,

ALBANY, N. Y.

T. G. ARNOLD,

MANUFACTURER OF

GAS-BURNERS

And Importer of SCORCH TIPS,

224 and 226 West 21st street,

formerly No. 447 BROOME ST., New York.

Mercury Cups, Portable Sockets, Burner Pillars, Burner Pliers, &c., &c.

C. GEFRORER,

Manufacturer of

GAS-BURNERS,

For Lighting and Heating Purposes.

GAS HEATING AND COOKING APPARATUS; FITTERS' ROVING APPARATUS, &c.

529 Commerce st., bet. Market & Arch, Philadelphia

JOSEPH LEES,

Sole Agent for the sale of

Thompson's Gas Controller

in the States of

CALIFORNIA AND OREGON,

San Francisco, Cal.

WOODEN PURIFYING TRAYS
PATENT
Conically Slotted Solid Wood Sieves
FOR PURIFIERS.

The Conically Slotted Solid Wood Tray or sieve was patented 21st October, 1862, and all persons are cautioned against purchasing them of any other person except the subscriber. The following companies are now using these trays.

Manhattan, New York,
Metropolitan,
New York
Albany
Troy
Brooklyn, L. I.
Williamsburgh,
Citizens
Baltimore Md.
Louisville, Ky.
Chicago, Ill
Cambridge,
And numerous others

Orders received by mail or otherwise.

JOHN L CHEESMAN.
147 Avenue C New York City

WEST'S IMPROVED PUMPS, the most Simple, Durable, and Powerful, and the Cheapest in use.

J. D. WEST & CO.,
No. 40 Cortland street,

JOSEPH LENNIG,
1615, 1617, and 1619 Francis St.,
Above Ridge Avenue, Philadelphia, Pa.,
MANUFACTURER OF
Wet and Dry Gas Meters,
STATION, SHOW, & EXPERI MENTAL METERS,
Photometers, Pressure Registers, Indicators, and Gauges, Gov ernors Meter Provers, Centre Seals, Fluid Gauges, &c.
GAS APPARATUS
Of the most reliable and approved construction manufactured and on hand at the
UNION GAS METER WORKS.

D. PARRISH, Jr.,
GAS ENGINEER
And Contractor for Coal or Oil Gas-Works.
Estimates given for Gas-Works, Gas-Holders, or any Gas Apparatus.
205 1-2 Walnut st., Philadelphia, Pa.
Box 1956, Post Office.

To Manufacturers of Petroleum Gas.

For sale, Parrish's Patent Gas and Air Mixer, adapted to all works using Petroleum or other oils, by which rich Petroleum Gas is mixed, after it leaves the holder, with a proper proportion of air, giving it the greatest illuminating power, without smoke, through any burners. The ap paratus being attached to the outlet pipe, requires no alteration of the works.

Apply at the Gas-Works of St. Nicholas Hotel, No. 63 Mercer st., N. Y., where one can be seen in operation; or address D. Parrish, Jr., St. Nicholas Hotel, New York city, or No. 1416 Arch street, Philadelphia.

SAVING OF FUEL TO PARTIES USING STEAM.
DAMPER REGULATORS.

Guaranteed to effect a great saving in fuel and give the most perfect regular ity of power. For sale by the subscri bers, who have established their exclu sive right to manufacture dam per regu lators, using diaphragms or flexible vessels of any kind. CLARK'S PATENT STEAM AND FIRE REGULATOR COMPANY, No. 117 Broadway, New York.

THE AUBIN BALLANCED
VALVE WATER METER,
(Used also for Oils and Liquors)

Is now in use by many City Water Cos, because of its low price, simplicity, durability, accuracy under any pressure, and (a great advantage) be cause it runs with less head than any meter used. Manufactured by H. Q. HAWLEY, Albany, N. Y.

R. D. WOOD & CO.,
MANUFACTURERS OF
CAST-IRON PIPE, RETORTS, &c.
Office, 400 Chestnut Street,
PHILADELPHIA.

Carrington & Co.'s
GENERAL
PURCHASING
AGENCY,
In Connection with all the Expresses
No. 30 Broadway,
NEW YORK.

Established 1854.

Purchases to order ANY article wanted from New York, (or from Europe,) for ladies' or gentlemen's use or wear,—comfort or luxury—from a cameo to a cashmere—a sea ring to a steam-engine.

Goods purchased at current City prices, and forwarded by Express, or as directed.

Commission, Five Per Cent.

Remittances, with orders, can be made by Express if preferred, as all Express Agents will take orders, receipt for and forward funds, and see to return of Goods.

THE HAVANA
MEXICAN & BRAZILIAN
EXPRESS.

CARRINGTON & CO.
30 Broadway.

Express for HAVANA and ISLAND OF CUBA by regular steamships weekly.

Express for MEXICO and VERA CRUZ on the 10th and 16th of every month.

Express for ST. THOMAS, BAHIA, and RIO DE JANEIRO each month.

Packages received for United States Brazil Squadron.

Freights should be sent to our office day before sailing of steamer, with in voice, contents and value.

The Greatest Improvement yet in the Sewing Machine Art!

A CURIOSITY WORTH SEEING!

Please send for circular with sample of sewing.

These Improved Machines save ONE HUNDRED PER CENT. of thread and silk, and make the LOCK-STITCH alike on both sides.

They require no instruction to operate perfectly, except "the printed directions."

No change in sewing from one kind of goods to another.

And no taking apart to clean or oil.

Our NEW MANUFACTORY is now complete, with all its machinery and tools entirely new, and is already rapidly turning out Machines which for BEAUTY and PERFECTION of FINISH are not sur passed by any manufacture in the world.

N. B.—Should any Machine prove unsatisfac tory, it can be returned and money refunded.

Agents wanted in counties not vassed by ur own agents.

Finkle & Lyon S. M. Co.
No. 538 BROADWAY, NEW YORK.

Gas Fixtures and House Furnishing GOODS,

E. V. HAUGHWOUT & CO.,

488, 490 and 492 Broadway.

Corner of Broome street, New York,

Manufacturers and dealers in

CHANDELIERS & GAS FIXTURES

Have a large and very choice assortment of GAS FIXTURES, which they offer at reduced pri ces, in view of the recent fall in gold. Their *Glass and Fire Gilt Chandeliers, are of entirely new designs,*

And well worthy of attention by those who wish to purchase

☞ *Fine Fixtures for their Houses.*

OFFICE OF WM. DAVIDSON,
INSPECTOR OF GAS METERS FOR THE STATE OF NEW YORK.

☞At the above address.

Architectural Iron Works,

13th and 14th streets, near Avenue C.
BRANCH CFFICE 42 DUANE ST.,
NEW YORK.

OFFICERS: { D. D. Badger, President.
N. Cheney, Vice Pres. & Act. Tr.
C. C. Gordon, Secretary Pro Tem.

PRODUCTS:

Iron and Fire-Proof Buildings, Iron Fronts, Rolling Shutters, Roofs, Domes, Bridges, Railings, Verandahs, Balustrades, Stairs, Cornices, Columns, Capitals, Arches. Window Lintels and Sills, Consoles, Brackets, Rosettes, Urns, Door and Window Guards, Lamp, Awning and Horse Posts, Venetian Blinds, Patent Lights, Iron Side Walks, Rolled, Rivetted and Cast Iron Beams and Girders, and all Architectural and General Iron Work.

H. M. BAILEY, Superintendant of Works.
J. WALTER CLARK, Accountant. J. M. DUCLOS, Arch.

GLYCERIN

For Wet Meters, Gasoline Machines, Hydraulic Presses, &c.

We warrant our Glycerine free from acid and not to corrode the Meter metal, or to congeal or freeze at a stated temperature—also, not to evaporate to any extent The advantages and savings derived from the use of our fluid can be testified by many Gas Light Companies which we have supplied. We only refer to the certificates of H. J. Miller, Esq., President of Cincinnati G. L. and Coke Co., and Dr. J. Lawrence Smith, Professor of Chemistry in the Louisville College, and President of the Louisville Gas Co.

HARTMAN & LAIST,

Office No. 71 Main street, Cincinnati —Chemical Works on Providence st, and Miami Canal, near Findlay st.

CERTIFICATE.

Office Louisville Gas Co., Louisville, June 28, 1865.

This is to certify, that the Louisville Gas Co. have used for about two years, the Glycerine prepared by Messrs. Hartman & Laist of Cincinnati, in their Wet Meters, and have in all instances found it to give most perfect satisfaction. Prior to the use of the above Glycerin, we had employed that manufactured by other parties, and we consider H. & L.'s superior to any we used.

J. LAWRENCE SMITH, President.

Office Cincinnati Gas Light and Coke Co., July 7, 1865.

This will certify, that Messrs. Hartman & Laist of Cincinnati, furnished this Company with Glycerin for Wet Meters some two years since It has proved very satisfactory, having resisted the action of frost during two winters and evaporating not more than six per cent. per annum, as guaranteed by them. The standard being, for density, 15 deg Beaume's scale. They were the first to introduce it practically to this Company. H. J. MILLER, President.

☞L. BRUCKMAN, 107 Warren street, up-stairs, Agent for New York.

KEROSENE

Cooking Apparatus.

All the cooking for a family can be done with Kerosene Oil, with less trouble and at less expense than by any other fuel.

Our stoves give no smoke or odor, and are not liable to get out of order, being as simple in every respect as a kerosene lamp. The Baker, Boiler, and Flat-Iron Heater are the only special articles of furniture required. For all other purposes, ordinary stove furniture may be used.

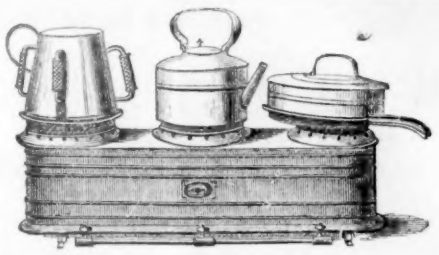
We would call attention to the fact that for the past three years, the Company has devoted itself almost exclusively to the manufacture of Kerosene Cooking Apparatus, and is prepared to guarantee that every article shall perform all that is claimed for it.

Liberal discounts to the trade. Send for circulars and price list.

KEROSENE LAMP HEATER CO.,

206 Pearl Street,

NEW YORK.



Cooking & Heating BY GAS.

CHEAPER THAN COAL OR WOOD.

The "EAGLE" Gas Heating

STOVES,

Positively guaranteed free from Smoke or Smell.

Will Heat Offices, Parlors, Dining, Sleeping, and Bat Rooms. Also,

The EAGLE Gas Cooking

STOVES & RANGES,

Will Boil, Broil, Roast, Bake, Toast, Stew, and Heat Irons.

The EAGLE GAS STOVES and RANGES have been in use for over Three years, and are found to be the most SIMPLE, COMPLETE and PERFECT Arrangment for HEATING and COOKING, in every respect, ever invented, and to do the Work with LESS TROUBLE, in LESS TIME and at LESS EXPENSE than any Coal or Wood stove.

Their WONDERFUL NEATNESS, CONVENIENCE and ECONOMY can be seen at a glance.

WE ALSO MANUFACTURE

COAL OIL STOVES,

For Cooking and Heating.

The American Advertising agency 389 Broadway, N Y. Bus. Dept., E. Alvord, cor. Dept., Fowler & Wells, receive orders for our stoves.

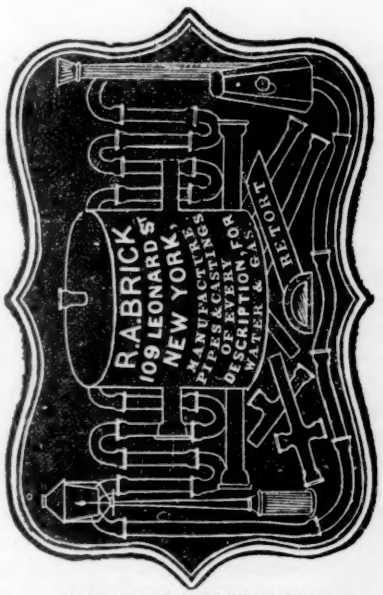
EAGLE GAS STOVE MANUFACTURING CO.

No. 474 BROADWAY, N. Y

☞The Company have descriptive Catalogues, which will be sent or delivered, upon application for them.

DRIVING PIPE,

BERGEN IRON WORKS,



OFFICE 109 LEONARD STREET, NEW YORK.

AND BANDS COMPLETE.

Mining & Petroleum Standard
AND
AMERICAN GAS-LIGHT JOURNAL.

Published on the 2d and 16th of Each Month

At No. 22 Pine Street, New York.

BRYANT, CALLENDER & CO.,
EDITORS AND PROPRIETORS.

Profs. PARTZ & BUCK, Consulting Chemists.

THURSDAY, AUGUST 2, 1866.

WISHING TO MAKE this Journal an organ of intelligent discussion to those of our readers who may wish to gain or give information on the subjects to which its colums and devoted, the publishers solicit letters from all among them who make the study of those subjects a pleasure, or a profession.

SUBSCRIBERS would confer a favor upon us by remitting CHECKS, or POST OFFICE MONEY ORDERS, as we are frequent losers where money is enclosed in letters.

CONTENTS.

Brayton's Patent Steam Generator—Illus	32	From Tennessee,	37
The Mines in Nova Scotia	33	Patent Claims,	37
New Plan for Submerged Cables	33	Discoveries of the last 50 yrs.	37
From Colorado	33	From Nevada County	37
List of Gas Light Companies in the United States,	34, 35	Improvement in the Manufacture of Illuminating Gas,	40
Improved Manufacture of Lucifer Matches	35	The Atlantic Cable	40
A Peat Gas Furnace	36	Montreal Water Works	40
Plastic Slate Roofing	36	Amalgam Sample	40
A Petrified Australian	36	The Author of Public Drinking Fountains in New York,	41
Fires in the Oil Regions,	36	Large Gun for the Paris Exhibition	41
		Brevities	48

Improvement in the Manufacture of Illuminating Gas.

We have waited impatiently for a long time past to learn of some important improvement in the manufacture of illuminating gas, but notwithstanding the representations made to us from various parties that very soon there would be a most complete set of works ready for puplic examination and test, we have never as yet had the pleasure of seeing any. There has been good cause for our expectation of *something* of real value, from the statements made to us, and we are much disappointed that the expectation has not been realized. That there are valuable features in some of the propositions suggested we know, but they must be reduced to practical use, or they are simply interesting experiments. We have waited most anxiously for Dr. Elmer's plan, fraught with such apparent advantages, but so far nothing has been evolved beyond the theory, and the limited experiments which have been exhibited by him. Gwynne's process holds out a most seductive and apparently economical plan, but that has slumbered (although at Elisabeth, it has proved satisfactory) until just now a set of works are being constructed at Paterson, N. J., upon this principle, and the test there will be conclusive, as the principal apparatus is being furnished by Herring & Floyd, proprietors of the Oregon Iron Foundry, Greenwich street, New York.

After the strong recommendation published in the *N. Y. Herald* in May last of petroleum for gas we supposed the Salisbury Petroleum Gas Company would be all alive to the question of showing what they can do, but beyond a small furnace, retort, &c. we have no exemplification of their plan; and so with other plans. Meantime the large gas works progress quietly, making their gas from coal, and the lesser ones, with a few exceptions, pursue that course, though it is well known by every one acquainted with the location of the gas works of the country that many of them could manufacture their gas at from 25 to 50 per cent. less than the present cost. In some places oil, in others wood, could be used to great advantage, either in connection with coal or not. If made from oil alone, it had better be diluted with wood, or water in the form of hydrogen gas, or common atmosphere. This proposition is solely for places where but a small quantity of gas is required; in cities where large works are required we consider the use of any other article than coal simply absurd. Peat approaches nearest as a substitute, and may sometimes be used in large works economically.

We have been surprised that gas companies in the interior, where coal is expensive, have not adopted, to a greater extent, wood and oil, inasmuch as there need be but slight change in the apparatus for either, and a combination of both with coal would be very productive of gas, and furnish coke for fuel.

There has been but little advancement in the *science* of gas making for many years; the improvement in it has been considerable, but *practical experience* has been the great teacher. For instance let us refer to the experimental and test book of Jos. A. Sabatton, Esq., Chief Engineer of the Manhattan Gas Works, who promptly and thoroughly tries everything that promises good. His tests prove that works of the magnitude his are cannot depend upon propositions and results from laboratories. Smaller gas works can do so in many instances.—For instance again, Mr. Sabatton has produced 12,000 cubic feet of standard gas from one ton of coal, the ordinary production from the same coal being 8,500 to 9,000 cubic feet; and he can always do it with more intense heat and two hours charges instead of six hours. But the rapidity of such work would require much additional labor, and in the end would not be so economical as the present mode. Small works can do it. The difficulty in these opoperations, however, presents itself in the want of capacity of the manipulators in such works. Distilling gas from coal is a simple thing, but to distil it with economy to the apparatus and in quantity of gas produced, involves the necessity of some science or great experience.

Since the days of Dr. Clayton (1739) when he manufactured illuminating gas by distilling coal, which product he called "spirit of coal," and filled bladders with it, often amusing his friends by puncturing the bladders with a pin, and then compressing them, make a jet which he lighted with a candle, a century and a quarter has passed, and although millions of dollars, and years and years of scientific and practical attention have been devoted to the manufacture of gas, we find ourselves but little enlightened in principle beyond the first proposition of distilling gas from coal—an article which nature gives us with proper proportions within itself for the purpose.

There has been proposition after proposition—water gas, wood gas, atmospheric gas, petroleum gas, combinations of zinc, superheated steam, etc., with vagaries innumerable, and out of all these it is very remarkable that there cannot be some principle established for the action of gas works of certain requisitions and in certain localities. The demand for such a principle is immense, and the field for improvement, especially in the manufacture of gas on a limited scale, is a wide one, and full of compensation to any one who will establish it upon such a basis as to give confidence in its soundness.

The Atlantic Cable.

The Cable which connects the Old World and the New has been successfully laid, and the ancient prophecy that "the ends of the earth will be brought together," seems about to be fulfilled; for from the north-western shores of this continent the telegraph wire is being carried into Russia, and the time is not far distant when the metallic belt will be completed—the lightning's path will "gird the world," and thought itself will hardly keep pace with the subtle messenger as it leaps forth on its errands of varied import. The success of this grand undertaking will mark an epoch in the world's history which will ever remain an illustrated page upon the record as an enterprise of unparalleled magnitude, and will be read by future generations with intense interest and satisfaction.

Those engaged in this enterprise have well earned the fame and gratitude which the world will award them, and the prominent part taken in it from the beginning by Mr. CYRUS W. FIELD should be a source of satisfaction and pride to the American people; for to his energy and indomitable perseverence more than any other man perhaps, is to be attributed the final success of the Atlantic Cable.

Montreal Water Works.

We have received a copy of the Annual Report of the Superintendent of the Montreal Water Works, Mr. Louis Lesage, for the year ending 31st January, 1866, printed by order of the Water Committe, and are pleased with the character of the work and the style in which it is gotten up. The Superintendent, in his review to the Committee, gives a concise and lucid statement concerning the state of the acqueduct, breast wheels and pumps, reservoir, hydrants, public fountains, etc., and the statistics are both instructive and interesting. A new Turbine Wheel has been introduced, and the report says: "During last winter the water of the acqueduct having been so low the breast wheels had to be stopped, and the supply of the city was reduced to what could be pumped by the turbine, which, as expected, proved to possess a great advantage over the breast wheels in these peculiar circumstances, in being capable of being worked at a lower head of water." It does not state what kind of turbine wheel was used. This would be interesting to know.

The average daily consumption during the year has been 4,238,590 gallons. Experiments show that greatest consumption took place at 9:30 a. m., being an increase of about 50 per cent. above the average daily consumption. The least consumption was at 1:30 a. m., a decrease of about 50 per cent. below the average daily consumption.

These experiments proved conclusively that at least two millions gallons of water of the daily supply was absorbed by leakage or wasted in the sewers of the city, and seem to invite improvements to prevent such needless waste.

The Water Committee in their report revert to the difficulty of getting a supply of water during the winter, in part owing to the great fall in the level of the river, and in part by the heavy and solid mass of ice formed over the acqueduct by the severe frost of that season. To remedy this they propose to prevent the formation of ice by covering the whole surface of the acqueduct with timber, at an estimated cost of $82,000; or, perhaps, instead of this, erect a steam pumping engine at the wheel-house, to be used at such time as the wheels cease to work, at a cost of from $55,000 to $67,000. It is found necessary to supply five millions gallons of water daily for the present population, which is about 120,000.

AMALGAM SAMPLE.—In our last issue we took occasion to correct the false reports which were gaining ground to the effect that Sodium Amalgam was explosive. Prof. WURTZ has favored us with a sample of the article which we shall be pleased to have the curious experiment upon. It is about as explosive in contact with water as a leaden plummet, and just about as dangerous.

PASS HIM AROUND.—In the *Evening Post* of the 14th ult., in an article on "Drinking Fountains," is printed this paragraph:

"If we knew the name of the author of this public benefit, we would gladly give him all the passport to public honor and gratitude, as well as to an immortal memory as a benefactor of his race, which these columns can afford. His best reward is in the inward consciousness of a good deed performed."

A correspondent to the same paper says: "The name of the gentleman is Alfred N. Lawrence, of New York. I have been intimate with him for very many years, and have been cognizant of all his efforts to get up these drinking fountains. He devoted much time to the object, and met and overcame many difficulties. He attended to all the castings and erection of the same, and all this he has done without the desire of reward beyond the consciousness of doing good to his fellow-citizens. I am glad to have an opportunity of giving his name to you."

A LARGE GUN FOR THE PARIS EXHIBITION.—The Prussian foundry at Essen is preparing a grand cannon for the Exhibition to carry a shot of about 1,250 lbs. A correspondent writes:

"The guns at Essen are very expensive. Those which fling a 250lb shot cost £3,000; their weight is 12,800 kilogrammes. In these days when big guns are the rage, it is interesting to know that Prussia can produce a gun that will fling such a shot; but we expect that, were it subjected to such severe tests of frequent firing as are considered necessary for our guns, the Prussian monster would not look near so sound after two hundred and fifty rounds."

WE HAVE prepared a description of the process of manufacturing gas, steam, and water tubing as carried on at the Brooklyn Tube Works of Mr. B. T. Benton, but for lack of space defer it till our next issue.

CANVASSERS WANTED.—We want Canvassers in every city, town and village for the MINING & PETROLEUM STANDARD AND AMERICAN GAS-LIGHT JOURNAL, *a paper devoted to Mining, Petroleum, Gas, Water Supply, and scientific subjects generally. Extra inducements afforded to energetic, reliable men.*

Specimen copies furnished free. Address

BRYANT, CALLENDER & CO.,
No. 22 Pine Street.

THE MINING & PETROLEUM STANDARD AND AMERICAN GAS-LIGHT JOURNAL, is published at No. 22 Pine Street opposite the Sub-Treasury Building on the 2d and 16th of every month, and is a recognized official organ of—

LIGHT, HEAT, MINING INTERESTS.

PETROLEUM, WATER-SUPPLY, AND

SCIENTIFIC SUBJECTS GENERALLY.

TERMS.

SUBSCRIPTION—Three dollars per annum in advance.

ADVERTISEMENTS.—One dollar per inch in column for each insertion. Large space or long time by special contract.—Payable in advance.

AGENTS

BOSTON—S. M. PETTENGILL & CO., No. 6 State Street.
PHILADELPHIA—JOY, COE & CO., No. 441 Chestnut st. cor. 5th.
Germany ... ...B. WESTERMAN & CO., of New York.
Great Britain....TRUBNER & CO., 60 Paternoster Row, London.
France..... LE JOURNAL DE L'ECLAIRAGE AU GAZ, 25 Boulevard Poissonnière.

☞All communications to be addressed to "The Editors," No. 22 Pine Street, New York

FOR SALE.

A SET OF PURIFYING BOXES, NEARLY 5 feet in diameter within, with covers and hoisting apparatus, center seal, connecting pipes, &c, with six inch openings; as good as new and in perfect order.

Offered at a low price on account of being too small for the works. Apply to or address

NEWBURGH GAS LIGHT CO.,
158 Newburgh, N. Y.

ALBERT C. KUCK,
Manufacturer and Dealer in
COAL OIL
LAMPS,
CHIMNEYS,
BURNERS,
WICKS,
SHADES,
BRACKETS,
AND
CHANDELIERS
In all varieties and at manufacturers' prices.

AGENT FOR THE CELEBRATED
"Eureka" and "Nonpareil" Lanterns.
FRUIT JARS OF ALL KINDS AND SIZES.
157 FULTON STREET, NEAR CLIFF St.,
NEW YORK.

F. H. LOVELL & CO.,
Successors to Alfred Bliss & Co.

MANUFACTURERS AND JOBBERS OF
KEROSENE
LAMPS
CHANDELIERS,
BRACKETS,
AND
Lamp Trimmings
GENERALLY.

Station, Sugar House, Street and Coal Oil Lanterns.
No. 233 Pearl Street,
159-182 *NEW YORK.*
Illustrated catalogues and price lists furnished on application.

NEW YORK LAMP COMPANY,
259 Pearl Street, New York.

We Would call especial attention to our recently improved
UNION BURNER,
which now burns without SMOKE or ODOR, With Coal or Petroleum Oil makes the cheapest light known,
One Cent for Eight Hours.
The improved Union Burner without chimney, for a hand or portable night lamp is unrivalled.
Patented in the United States, England, France and Belgium.

NEW YORK LAMP CO.,
58 259 Pearl-street, near Fulton, New York.

Something New and Useful.

A POCKET LANTERN, which, when folded, occupies the space of a cigar case, and when open gives a good light. The most convenient article for any one who is liable to be out at night. Sample sent by mail on receipt of one dollar.
Address
NEW YORK LAMP CO.,
57 259 Pearl-street, New York.

The Aladdin No-Chimney Burner

GIVES A BRILLIANT LIGHT WITHOUT THE use of a chimney. Fits on to almost all kerosene lamps. It is the best no-chimney burner made, and no family should be without them. Samples sent by mail on receipt of 50 cents.
Address
NEW YORK LAMP CO.,
57-62 259 Pearl-street, New York.

PLASTIC SLATE ROOFING
JOINT STOCK COMPANY.
OFFICE 157 [Room 19] BROADWAY,
New York.
W. C. POTTER, Vice Pres't.
J. M. ALLEN, Sec. and Treas. **LICENSES GRANTED.**

PLASTIC SLATE
FOR
ROOFING & OTHER PURPOSES.

The process of reconstructing Slate Stone from a disintegrated state was
PATENTED FEBRUARY 21st, 1865.
It is a combination of
Pulverized Slate & Viscous Matter,
(the latter possessing qualities of geological and chemical affinity for the former,) and is a development of one of the simple but unalterable tendencies of nature.
As a Roofing Material it Stands Unrivalled.
A mastic—it adapts itself to every shape and slope. Non-combustible, impervious, non-expansive, and undecaying.
Frost does not Crack nor Heat Dissolve it.
The only roofing material ever discovered that will resist the action of the elements as long as the structure it protects. Being susceptible of little, if any wear, from exposure, and
Perfectly Fire-Proof,
It is unequalled as a coating for Railroad and Farm Buildings, Fences, Bridges, bottoms of Vessels, Vaults, etc.

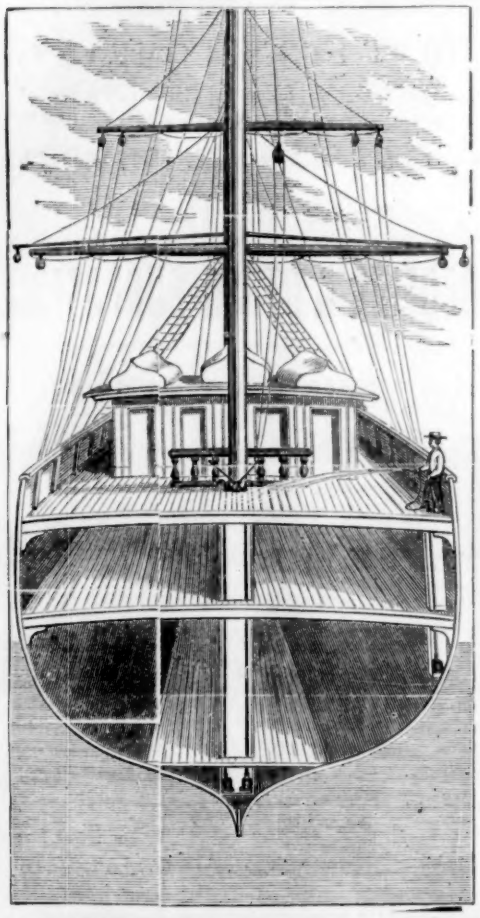
PARTZ & BUCK
MINING ENGINEERS, METALLURGISTS
AND
ANALYTICAL CHEMISTS,
57 BROADWAY,
A. F. W. PARTZ, C. ELTON BUCK, NEW YORK.

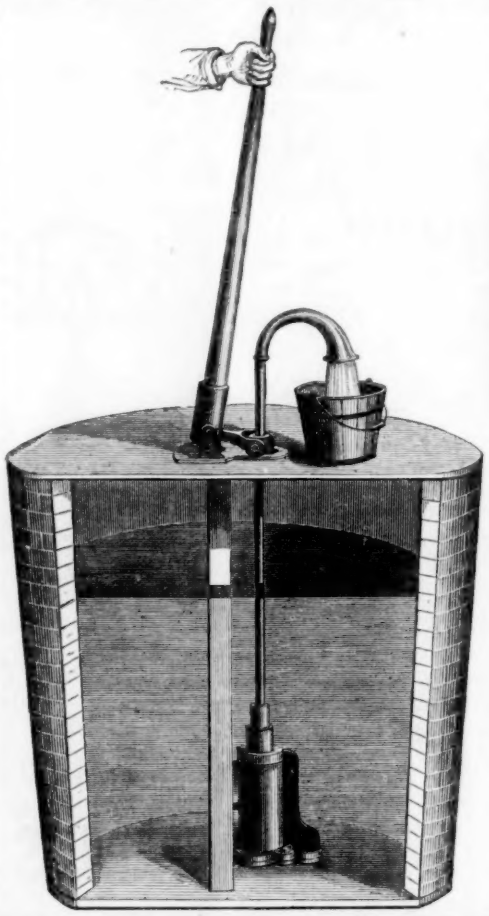
MAYNARD & TIEMANN,
Mining Engineers & Metallurgists
240 PEARL ST., NEW YORK,
—AND—
CENTRAL CITY, COLORADO.
G. W. MAYNARD. J. H. TIEMANN.

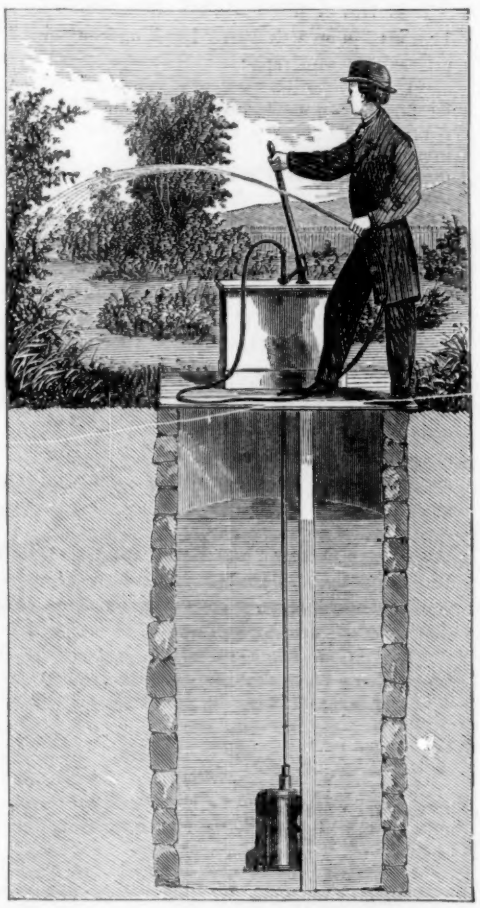
CHAS. HOWDON SMITH,
BROKER IN MINING STOCKS
AND OTHER SECURITIES,
No. 5 1-2 PINE STREET,
ROOM NO. 5, NEW YORK.

T. CASSIDY & CO.,
(SUCCESSORS TO P. CASSIDY,)
Dealers in Old and New
IRON, COPPER, BRASS,
LEAD, SPELTER, &C.,
Corner of Bridge and John Streets,
BROOKLYN.
☞N. B.—The highest cash price paid for the above named articles.
T. CASSIDY. 57-80 J. PEARCE.

NATIONAL FOUNDRY
AND PIPE WORKS.
Office and Works—Carroll, Pike, Smallman and Wilkins Streets,
PITTSBURGH, PA.
WM. SMITH,
Manufacturer of all kinds of GAS and WATER PIPE, BRANCHES, CONNECTIONS, T's, ELBOWS, and ALL CASTINGS USED AT GAS AND WATER WORKS.
I offer special inducements to parties wishing to purchase, my Pipe is Smooth, regular in weights, and cast vertically.
N. B.—Pipe from 3-inch and upwards, cast in 12-ft. lengths.
☞SEND FOR CIRCULAR AND PRICE LIST.
149







AMERICAN PUMP MANUFACTURING COMPANY,

DEPOT NO. 40 DEY STREET, NEW YORK.

A. B. VAN OLINDA, Secretary. C. V. B. OSTRANDER, Treasurer. E. BEADLESTON, President.

STATE AND COUNTY RIGHTS FOR SALE.

Pumps, completed, will be delivered from the manufactory of the Company, to parties purchasing rights at a royalty of One Dollar each.

THE PATENT SUBMERGED PUMP.

This valuable Invention, now first introduced, will, it is believed, supersede all classes for any purpose in use at the present time.

ITS ADVANTAGES.

FIRST.—SIMPLICITY. The entire pump is composed of but six parts, all of cast-iron, which can be put together by any mechanic.

SECOND.—DURABILITY. From the fact that it is always submerged, it is perfectly lubricated, and requires no packing As no water can remain in the pipe when not in motion, there is no danger of freezing.

THIRD.—CAPACITY. It is contended that, for the power applied, this Pump excels all others. The No. 1 (the smallest size,) of this Pump, with the power of one hand, has a capacity of thirty gallons per minute, and will throw a stream seventy feet in the air.

FOURTH.—CHEAPNESS. For economy, this Pump surpasses all others, its first cost being about one-third less than that of other Pumps of the same capacity, and being much less both in size and weight, there is a great saving in transportation.

ITSU SES.

FIRST.—For a House Pump; the smallest size of the patent Submerged Pump is sufficient for all family purposes. Placed in a well or cistern, water may be conveyed to every room in a common sized house.

SECOND.—For a Farm Pump; for all purposes connected with irrigating, watering stock, etc., etc. This Pump can be placed in running streams, ponds, bayous, etc., and water conveyed to any required distance.

THIRD.—For a Ship Pump; Any ship owner or captain, with short experience in the use of this Pump, will give his unqualified approval for ship purposes, either to be used as a bilge pump simply, or for washing decks, etc. From its simplicity, as a bilge Pump it will be found entirely free from choking, and will clear grain, dirt, stones, etc., with ease.

FOURTH.—For a Factory Pump, or for air in Oil Wells, for Breweries, or for pumping acids, hot liquors, etc., it is invaluable. It cannot be affected by any liquid.

FIFTH.—To all Directors and Officers connected with mining interests, the PATENT SUBMERGED PUMP presents great advantages.

The experience of the last five years have clearly proved at what great expense, both in first cost and freight, it has been necessary to be at to secure the proper means of expelling water from the mines, quarries, etc. With this Pump an immense saving is effected in both instances, as in first cost it is much less than other Pumps of the same capacity and power.

Its principle is that of a Double-acting Force Pump, with a heavy double-acting piston cast in one piece, and a double-acting iron valve within the same, without the use of leather valves or any packing whatever.

DIRECTIONS FOR ADJUSTING PUMPS.

1st. Find the exact measurement of the well or cistern from the extreme bottom to the top or curb, after which make such an allowance as may be required, above the curb or top, as will accommodate the sized vessel required to be used, and in respect to the quantity of pipe required, always deducting for the length of the Pump and the space between the bottom and the Pump. 2d. Provide a plank, to which the Pump must be secured, not less than seven inches wide by two or two and a half inches thick, which should reach from the bottom to the top of the well or cistern, always placing the plank on the side of the well or cistern. 3d. Before putting the plank into a well or cistern, fit and bolt the Pump to the plank, and screw the pipe firmly in, taking care to have the Pump not less than one foot from the bottom of a well, nor less than six inches from the bottom of a cistern. Yet, if the water be six feet deep in a well, then adjust the Pump three feet from the bottom, and in like proportion as the case will permit, always being governed by the depth of water in the well, and always observing the necessity of securing the plank at the bottom of the curb, by braces across the well, and standing perfectly plumb and solid under the platform orcovering of the well, when the fulcrum can be fastened to the platform, taking care to give the pipe free action when in motion.

MANHATTAN

Fire Brick & Enamelled Clay Retort Works,

MAURER & WEBER,

(Of the late firm of B. Kreischer & Co.)
PROPRIETORS.

Office & Works in 15th street, Avenue C,

MANUFACTURERS OF

Fire Brick and Tiles,

OF ALL SHAPES & SIZES,

Fire Mortar, Clay and Sand.

☞Articles of every description made to order, at short notice. (135

HY. MAURER. ADAM WEBER.

NEW YORK

Fire Brick and Clay Retort Works

☞ *Established in* 1845, ☜

(Branch Works at Kreischerville, Staten Island,)

B. KREISCHER,

Office 56 Goerck St, cor. Delancey, New York.
GAS RETORTS, TILES and FIRE-BRICK of all shapes and sizes.
FIRE MORTAR, CLAY, and SAND.
Articles of every description made to order at the shortest notice.
B. KREISCHER.

J. K. BRICK & Co.,

BROOKLYN CLAY RETORT,

—AND—

FIRE BRICK WORKS,

VANDYKE STREET, BROOKLYN, N. Y.

JOSEPH K. BRICK, EDWARD D. WHITE.

J. H. GAUTIER & CO.,

MANUFACTURERS OF

Gas Retorts, Tiles, Fire Brick,

Black Lead Crucibles, and Carburet of Iron Stove Polish,

JERSEY CITY, N. J.

Refer to—Manhattan Gas Light Co., New York. [135

Philadelphia Fire Brick Works,

Corner of Vine and Twenty Third sts., Philadelphia,

JOHN NEWKUMET,

Manufacturer of all kinds of FIRE-BRICK, GAS-HOUSE TILES, to suit all the different plans in use. Clay Retorts and Dentists' Muffles. Orders filled at short notice.

PRINCE'S METALLIC PAINT,

AN INDESTRUCTIBLE COATING FOR

IRON, TIN, and WOOD.

It consists of seventy-two parts Oxide of Iron, and twenty-eight parts Cement Lime Stone in the one hundred pounds.

It has much more body than red or white lead. It is warranted perfectly water and fire-proof and to withstand a greater heat on metals, without scaling, than any other paint in use.

It is a perfect cover for all kinds of iron, tin, or wood-work, out-houses, and canvas coverings. It prevents and arrests the corrosion of metals, and is not affected by the action of salt, gases, acids or ammonia.

It hardens under water, as has been fully demonstrated by its application to gas-holders, by many of the largest gas companies in the United States; which companies having thoroughly tested its properties as herein claimed, pronounce in its favor over any other paints in the market, even though said at double its price.

As a coating for patterns of iron or wood, when mixed with shellac, it is much superior to beeswax, oil, or shellac alone, as has been proven at the large founderies in the country.

For patching boilers and making joints, it is considered superior to red lead, or any other preparation.

For cleaning metals it takes the place of crocus, ouge, and emery, being better and cheaper.

This Paint requires no more oil than dry lead or zinc, and much less than the ordinary mineral paints. It is free from any waste, and possesses a spreading and covering power unequaled.

Terms, by the Barrel or Half Barrel, Five Cents per Pound.

A liberal discount made to parties purchasing by the ton.

A Barrel or Ton will be forwarded to any gas companies desirous of testing its qualities, for which there will be no charge if it does not give entire satisfaction as being the cheapest and most durable of all other Paints in the market.

Also, Prince's Imperial Black Paint, and Prince's Protoxide of Iron.

DANIEL SLOAN, General Agent,
115 LIBERTY STREET, NEW YORK.

Local Agent—CALVIN GAY, 29 Federal st., Boston.

AMALGAM BELLS,
AMALGAM BELLS,
AMALGAM BELLS,
AMALGAM BELLS

As prices within the reach of every Church, School, Cemetery, Factory, or Farm in the land. Their use throughout the United States and Canadas for the past six years has proven them to combine most valuable qualities. Among which are TONE, STRENGTH, SONOROUSNESS, and DURABILITY OF VIBRATION, unequalled by any other manufacture. Sizes from 15 to 5,000 lbs., costing TWO-THIRDS LESS than other metal, or 25 cents per pound, at which price I warrant them twelve months. Old bell metal taken in exchange, or bought for cash. Send for a circular to the manufacturer,

JOHN B. ROBINSON,
No. 36 DEY STREET, NEW YORK.

List of Academy, Steamboat, Fire-alarm, and Church Bells, with particulars as to Weight, Sizes, Price of Bells, Hangings, etc.

Weight of Bells.	Diameter.	Price of Bells without Hangings.	Price of Patent Hangings.	Price of Bell and Hangings complete.
225 lbs.	26 inches.	$56 00	$15 00	$71 00
275 "	42	69 00	18 00	87 00
375	36	94 00	22 00	116 00
450	84	112 00	25 00	137 00
600	02	150 00	30 00	180 00
750	39	188 00	35 00	225 00
1,000	64	250 00	42 00	292 00
1,200	48	300 00	45 00	345 00
1,400	50	350 00	50 00	400 00
1,600	52	400 00	54 00	454 00
1,800	55	450 00	60 00	510 00
2,000	58	500 00	62 00	562 00
2,500	60	625 00	72 00	697 00
3,000	63	750 00	85 00	835 00
3,500	66	875 00	87 00	962 00
4,000	69	1,000 00	100 00	1,100 00
4,500	72	1,125 00	113 00	1,238 00
5,000	75	1,250 00	125 00	1,375 00

List of Prices, Weights, and Sizes of Farm, Hotel, Steamboat, School-house, Shop, and Factory Bell.

These Bells are fitted with Yoke, Standard's Crank and Bolt, complete for use.

Weight of Bell and Hangings.	Diameter.	Cost of Bell and Hangings complete.
15 lbs.	7 inches.	$3 75
20	8½	5 00
35	10	8 75
50	12	12 50
75	16	18 75
100	18	25 00
150	20	37 50
200	22	50 00
250	24	62 50

Larger Sizes made to Order at 25 cents per pound.

Guarantee.—All Bells sold at the above prices WARRANTED against breakage by fair ringing, for TWELVE MONTHS from time of purchasing. Should one fail, a new bell will be given by urning the broken one.

Orders may be sent through the AMERICAN ADVERTISING AGENCY, 389 Broadway, New York.

In case a Bell breaks after the expiration of the Warrantee, I allow HALF PRICE for the old metal. JOHN B. ROBINSON, 36 Dey Street, N. Y.

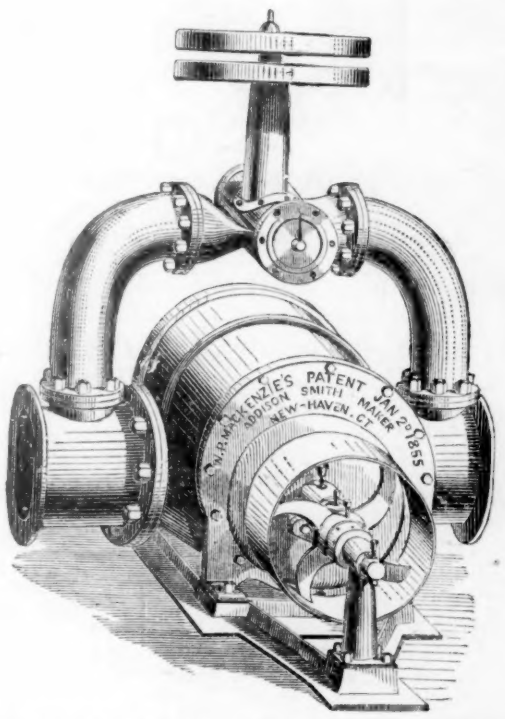
SMITH & SAYRE.

MANUFACTURING COMPANY.

THE MACKENZEI PATENT GAS EXHAUSTER

AND

PATENT COMPENSATOR.



They are made to pass from 4,000 to 150,000 cubic feet of gas per hour; will increase the production and illuminating power of the gas, and add very much to the durability of the retorts, either clay or iron. The Compensator obviates entirely the necessity of water-joints, is compact, durable, cleanly, not liable to get out of order, self-acting, quiet, and certain in its operation.

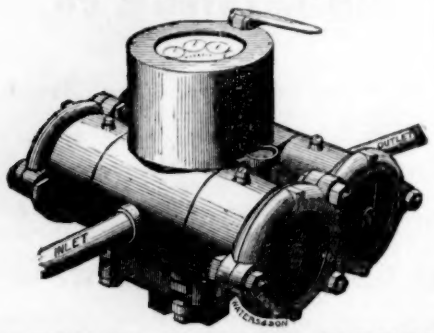
We are also sole proprietors and manufacturers of the

MACKENZIE PATENT BLOWER, PATENT CUPOLA AND SMELTING FURNACE.

The Blower is a Force Blast machine, durably built, and can be driven with one-third the power required to drive the ordinary Fan. The Cupolas are manufactured in sizes to melt from 1 ton to 20 ons per hour, will save one quarter of the time required by the old style Cupola, and 33 per cent. fuel. Address

B. KREISCHER., Prest.
JAS. SAYER, Treas,
CHAS. W. ISBELL, Sec'y. Office 484 Broadway, New York.

H. R. WORTHINGTON'S



PATENT WATER-METER

This Meter is also used for the measurement of Oil —it combines

ACCURACY, SIMPLICITY, and REMARKABLE DURABILITY with such ease and certainty of motion, as to offer no appreciable obstructions to the flow of water in the pipes to which it is connected, as it runs and registers upon three inches head, or when delivering the smallest stream. These qualities, with its low cost, have caused its extensive adoption by corporations and individuals, in many of our largest cities.

HENRY R. WORTHINGTON,
61 Beekman steet, N. Y.

CHASE & CO.,

New York and Philadelphia Ornamental Iron Works.

GARDEN ADORNMENTS,

VASES, FOUNTAINS, STATUARY, ARBORS, RUSTIC CHAIRS, SETTEES, TRELLISSES, &c.

Cem tery Embellishments,

URNS, IVY CROSSES, GRAVE BORDERS, WIRE ARCHES, BOQUET VASES, &c.

Wire, Cast Iron and Bronze Railings,

For enclosing Lots, Public Squares, &c.

☞ *Iron Furniture, Bedsteads, &c., &c.,*

The largest variety in the United States.

STABLE FIXTURES,

RACKS, MANGERS, &c.

No. 524 Broadway, New York,

Opposite St. Nicholas Hotel. [127

H. P. GENGEMBRE'S

PATENT

Non Freezing and Non Evaporating METER FLUID,

☞ Far cheaper than any other in use. ☜

For Filling Wet Gas Meters, cheaper, in the long run, than water.

Six years in general use in works using it, to the exclusion of all other fluid, and driving the dry meter out of use, enables us to recommend the patent with perfect confidence.

For information and purchase of rights, apply to

A. DOISEY, Esq., Sole Agent,
Box 2,180, Cincinnati, Ohio, or to

H. P. GENGEMBRE, Pittsburgh, Pa.

The privilege of using the Patent has been granted in the following cities.

Allegheny City, Pa.; Leavenworth, Kansas; St. Louis, Mo.; Chillicothe, O; New York, N. Y.; Washington, Pa.; Greenbush, N. Y.; Ottawa, N. Y.; Detroit, Mich.; Hannibal, Mich.; Linn, Mass.; Lansinburg, N. Y.; Rock Island, Ill.; Burlington, Iowa; Mount Vernon, O; Troy, N. Y.; Galena, Ill. Pittsburgh, Pa.; Ithica, N. Y.; Akron, O; New Castle, Pa.; Portsmouth, O; Brooklyn, N. Y.; Mansfield, O.; Steubenville, O.; Fort Wayne, Ind.; Peoria, Ill.; Wooster, O.; Bellefonte, Pa.; Kalamazoo, Mich.; Seneca Falls, N. Y.; Birmingham, Pa; Saratoga Springs, N. Y.; Salem, O.; Dubuque, Iowa; Newark, O.; Wheeling, Va.; Jersey City, N.J. Quincy, Ill. Piqua, O.; and others. [141

PERCE'S MAGNETIC GLOBES,

AND

PERCE'S MAGNETIC OBJECTS.

A beautiful Terrestial Globe, elegantly mounted and colored, and supplied with

MAGNETIC MEN,
MAGNETIC LADIES,
MAGNETIC SHIPS,
MAGNETIC STEAMERS,
MAGNETIC FLAGS,
MAGNETIC LIONS,
MAGNETIC BEARS,
MAGNETIC ELEPHANTS,
MAGNETIC LIGHTHOUSES,
etc., etc., forming a
MINIATURE MAGNETIC WORLD.

PERCE'S MAGNETIC GLOBE has won the warmest ecomiums from the press; from men of science, and from all lovers of the beautiful and useful in science, in art, wherever it has been seen. As an article of HOUSEHOLD FURNITURE, it is elegant and useful; "as useful," says the New York *Independent*, "for the entertainment and instruction of the little ones at home as the piano, or any other instrument for domestic amusement and instruction."

"PERCE'S MAGNETIC GLOBES AND MAGNETIC OBJECTS afford a wide field for many pleasing and surprising experiments; and with it, aided by the explanations which accompany it, our young readers will be able to conjure up many interesting illustrations and games which they will find profitable and amusing."

STYLES AND PRICES.

Perce's Magnetic Globe, 5 in. dia., Plain Stand,	$ 5
Perce's Magnetic Globe, 5 in. dia., Brass Meridian,	7
Perce's Magnetic Globe, 7 in. dia., Plain Stand,	10
Perce's Magnetic Globe, 7 in. dia., Brass Meridian,	25
Perce's Magnetic Globe, 12 in. dia., Plain Stand,	20
Perce's Magnetic Globe, 12 in. dia., Brass Meridian,	25

The Globes of all the above sizes and styles are finished in the highest style of the art, are mounted on polished black walnut stands, and will form an elegant and attractive ornament for the parlor, library or drawing-room.

One dozen of Perce's Magnetic Objects, with plainly written directions, accompany each globe without additional cost.

All Globes and Objects are packed neatly in boxes, and will be sent safely any distance by express, freight paid, on receipt of price.

CHARLES SCRIBNER & CO., Publishers,
151 No. 124 Grand-st., New-York.

THOMAS CASSIDY,

Iron Founder & Pattern Maker

Corner Hudson and Park Avenues,

BROOKLYN.

Iron Store Fronts put up at short notice.

Square and Round Columns, Truss Girders, Vault Beams, Window Lintels, Sills, &c.

A large assortment of Railing Castings constantly on hand, or made to order, at the shortest notice.

Lamp Posts—Brooklyn Pattern.

☞ A large stock of the usual sizes of Round Columns kept on hand.

OREGON IRON FOUNDRY,

738, 740, 742 and 744,

Greenwich Street, New York.

CASTINGS FOR

GAS WORKS

OF ALL DESCRIPTIONS, INCLUDING

Purifiers, Exhausters, Compensators, Self-Acting Valves, Branches, Bends, &c.

FLOYD'S PATENT

Malleable Iron Retort Lid.

SABATTON'S PATENT

Furnace Door and Frame.

Refers to—J. A. Sabatton, Esq., Engineer Manhattan Gas Co.—Col. A. J. White, Metropolitan Gas Co.—C. C Mowton, Engineer New York Gas Light Co.—J. Mowton Saunders, Engineer Baltimore Gas Co.—John T. Harrison, Engineer Savannah Gas Co.

135] HERRING & FLOYD, Proprietors.

SILAS C. HERRING. JAMES E. FLOYD

FOR SALE.

A SET OF PURIFYING BOXES, 5 x 10 FEET, with Covers and Hoisting Apparatus, Center Seal, Connecting Pipes, &c., with eight-inch openings, nearly new, and in perfect order. Offered at a low price on account of being too smal for the works. Apply to or address

HARTFORD CITY GAS LIGHT CO.,
58 56 Hartford, Conn.

EMPIRE LINE

FOR SAVANNAH, GEORGIA,

Every Saturday, the elegant Side-Wheel Steamships

SAN SALVADOR,

Commander, Joshua Atkins, and

MISSOURI,

Commander, Winslow Loveland.

Every SATURDAY, from pier 13 North River.

Have been placed on the route to Savannah by the Atlantic Mail Steamship Company of New York, and are intended to be run by them in a manner to meet the first class requirements of the trade.

The cabin accommodations of these ships are not excelled by any Steamers on the coast, and although their carrying capacity is large, their draught of water enables them to insure a passage without detention in the river

Missouri,	Saturday	July 21	Missouri,	Saturday,	Aug. 18
San Salvador,	..	July 28	San Salvador,	..	Aug. 25
Missouri,	..	Aug. 4	Missouri,	.	Sept. 1
San Salvador,	..	Aug. 11	San Salvador,	..	Sepe. 8

Returning, leave Savannah every Saturday at 3 o'clock, P. M.

Bills of Lading furnished and signed on the Pier.

For further particulars, engagement of Freight or passage, apply to

GARRISON & ALLEN, Agents,
No. 5 Bowling Green.

Agent at Savannah, B. H. HARDEE.

CENTRAL OF NEW JERSEY.

Leave from pier No. 15 North River, (Liberty Street,) daily at 7 a. m. for Easton, Mauch Chunk, Williamsport, Wilkesbarre, Mahanoy City, &c. Mail train at 8 a. m. for Flemington, Easton, Water Gap, Scranton, Wilkesbarre, Great Bend, Pittston, Binghampton, &c., 9 a. m. Western Express for Easton, Allentown, Harrisburgh, Pittsburgh, and the West, with but one change of cars to Cincinnati or Chicago, and but two changes to St. Louis. 12 m. for Easton, Allentown, Mauch Chunk, Reading, Pottsville, Harrisburgh, &c. 4 p. m. for Easton, Scranton, Great Bend, Bethlehem, and Mauch Chunk. 5 p. m. for Somerville and Flemington. 6:15 p. m. for Somerville. 7 p. m. for Somerville. 8 p. m. Western Express for Easton, Allentown, Reading, Harrisburg, Pittsburg, and the West.—Sleeping cars through from Jersey City to Pittsburg every evening.

ERIE RAILROAD.

Trains leave New York, from the foot of Chambers Street, N. R., via the Pavonia Ferry, at 7.45 a. m., Day Express, for Rochester Buffalo, Salamanca Dunkirk and the West. Connects at Buffalo with Lake Shore and Grand Trunk R.R., and at Salamanca with Atlantic & Great Western R.R. 8·30 a. m. milk and way train daily, Otisville; 10 a. m. Express Mail for Buffalo, Salamanca and Dunkirk, connecting with the Lake Shore and Atlantic & Great Western R. R.; 3 p. m. way train for Middletown. 4.30 p. m. way train for Pert Jervis, Newburgh and Warwic. 5.30 p. m. Night Express, for Rochester, Buffalo, Salamanca Dunkirk, and the West. 7 p. m. Lightning Express, daily, for Rochester Buffalo, Salamanca, Dunkirk and West. Connects at Buffalo with Lake Shore and Grand Trunk R. R., and at Salamanca with Atlantic and Great Western R.R. 8 p. m. Emigrant train for Buffalo, Salamanca, Dunkirk and West. Trains leave Jersey City for Patterson at 6·45, 7.45, *8·30, 9·15, 10 and 11·45 a. m.; 1·45, 3, *4.15, 4·30, 5.15, 5·30, 6, 6·30, *8 and 11 p. m. Those marked thus * run daily.

NEW JERSEY, (via PHILADELPHIA.

BALTIMORE AND WASHINGTON.

DEPOT FOOT OF CORTLANDT ST.

Trains for Philadelphia only leave New York at 7* and 10,00* a. m.; 12*, 4*, and 6* p. m. and 12* Midnight.

For Baltimore, 8* and 10.00* a. m. and 6,* 7,* p. m. and 12a Midnight.

For Washington, 8* and 10,00* a. m. and 6*, 7* p. m. and 12* Midnight. Sleeping cars attached to 7 p. m. Express trains marked thus *

For Newark, 6, 6.30, 7.30, 8.20, 9, 10, 11, and 11.40 a. m., 12 m, 1, 2, 3, 3.30, 4.10, 4.30, 5, 5.10, 5.20, 5.40, 6.20, 7.10, 8.20, 10, and 12 p. m —Sunday 6 p. m. only.

For Elizabeth, 6, 7, 8 20, and 10 and 11.40 a. m.; 12 m; 1, 2, 3, 3.30, 4,10, 4.30, 5, 5,10, 5.40, 6.10, 7.10, 8.20, 10 and 12 p. m.

For Rahway, *6 (stopping at Market Street only, Newark) 7, and 10 a. m. and 12, 2, 3.30, 4.10, 4.30, 5.10, 5.40, 6.20, 7.10, and 12 p. m.—Sunday, 6 p. m.

For New Brunswick, 7, 8, and 10, a. m.; 12 m.; 4, 4,10, 5.10, 6, 6.20 and 12 p. m.

For Millstone, at 7 a. m.; 12 m; 2.15, and 4.10 p. m.

On Sundays trains leave New York for Philadelphia and intermediate stations at 6 p. m. and for Washington, 7,00 p. m.

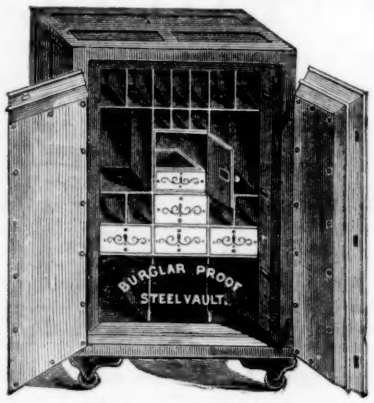
PHŒNIX

Salamander Safes

Secured with the most approved

PatentPowder and Burglar Proof Locks.

The Best Fire and Burglar Proof Safe IN THE WORLD!



FOR SALE BY

O. C. QUIRK.

Depot 28 Liberty Street, NEW YORK.

LIST OF NEW YORK PRICES.

DOUBLE FLANGE SINGLE DOOR SAFES. Inside Measure					DOUBLE FLANGE FOLDING DOOR SAFES. Inside Measure.				
No.	High.	Wide.	Deep.	Price.	No.	High.	Wide.	Deep.	Price.
1	14	10	10	$80	1	22	32	16	$275
2	16	12	11	90	2	34	24	16	300
3	20	15	12½	120	2½	32	33	16	400
4	21¼	21¼	13	150	3	38	24	16	350
5	26	18	13	220	4	44	24	16	400
6	22½	26	14	250	5	44	32	17	500
7	26	21	14	240	5½	40	38	17	525
8	29	24	14½	300	6	50	32	17	550
9	32	22	14½	300	7	50	88	17	600
10	32	27	14½	350	8	56	38	18	750
					9	56	44	18	850
					10	64	51	19	1000

NOTICE—Parties ordering Safes can have any Lock they desire.

Jewelers' and Banker's Safes Made to Order, Lined with Hardened Steel or Chilled Iron.

HOUSE AND PLATE SAFES.

☞ This CELEBRATED SAFE has been tested in all the Large Fires during the past 31 years, including the great fire in New York City A. D. 1835, and the thousands of certificates from Merchants, Bankers, and Mechanics of all trades, that have been given to this, the ONLY TRUE "SALAMANDER," renders it useless for the subscriber to multiply words in its favor, as full twenty-five thousand of the Salamander Safes have been manufactured and sold in the United States; and in almost every large fire that has taken place during the last thirty years, these safes have been subjected to the severest tests, and NOT ONE of the genuine Salamanders has ever been destroyed.

☞ A good assortment of New and Second-hand Safes constantly on hand

O. C. QUIRK.

155 Warehouse No. 28 Liberty Street.

JOSEPH NASON & CO.,

No. 61 Beekman street, corner of Gold,

NEW YORK.

Manufacturers of WROUGHT IRON PIPES and Fittings for Steam, Gas and Water, Boiler Flues, Steam Boilers, Coils, Heaters, Evaporators, Pumps, Ventilating Machinery, and Apparatus for Warming Buildings by Steam and Hot Water.

OIL TUBING, CAST IRON DRIVING PIPE,

Boring Tools, Oil Pumps, Sand Pumps, Stuffing Boxes, Tongs, Clamps, Swivels, Joints, &c. 131

BIRD, PERKINS & JOB.,

(Formerly J. P. Melledge & Co.,)

General Commission Merchants,

And Importers of

PROVINCIAL COAL,

For Gas, Steam and Iron Manufactures.

39 India Wharf,.....Boston.

SAM'L T. BIRD, JAMES D. PERKINS, DANIEL W. JOB. [134

Represented in New York by GEORGE H. BREWER, No. 104 Wall Street.

EDDY'S

Kerosene Cooking & Heating

STOVES AND RANGES.

THESE COOKING STOVES WILL

☞ *Bake, Boil, Stew, Fry and Roast,*

With the greatest economy and facility, and without heating the room in which they are used. They are perfectly simple, operating like an ordinary Kerosene Lamp with a chimney, and are the only Kerosene Stoves that burn without smoke or odor.

"We have been perfectly astonished to see what a labor-saving, dirt saving and heat-saving institution is EDDY'S PATENT KEROSENE STOVE. Taking the cost of running it, and the result attained, it is the best patent in the market."—*Worcester Daily Spy.*

Our Heating and Cooking Stoves are very convenient and economical, especially where a fire is required but a few hours at a time.

Orders for Stoves may be sent through American Advertising Agency, 389 Broadway, New York.

LESLEY & ELLIOT,

Manufacturers, No. 494 Broadway, New York.

Send for Illustrated Circular. (136

KNITTING MACHINES

FOR

Families and Manufacturers,

☞ *Something New and Invaluable for Family Use.*

We offer the public the simplest, strongest and best Knitting Machine in the world.

It occupies but little space—is portable and can be attached to a stand or table, weighs about 40 lbs.

It will knit a variety of Stitches—the breakage of needles is trifling—the cost of needles is insignificant and the most delicate material can be knit pure and spotless, as the needles are not oiled.

Orders for Machines may be sent through the American Advertising Agency, 389 Broadway, N. Y.

Send for a Circular—Agents wanted.

DALTON KNITTING MACHINE CO.,

137] 537 Broadway, N. Y.

WEED'S

HIGHEST PREMIUM

Shuttle Sewing Machine

Has only to be seen and operated to be Appreciated.

Call and see for yourself before purchasing. Please bring samples of various kinds of thread, (such as is usually found at stores,) and various kinds of fabric, which you know the former most popular Sewing Machines either cannot work at all, or, at best very imperfectly.

SUPERIORITY.

over any other Machine in the market will be seen at a glance.

1st It runs easily and rapidly, and is so constructed as to endure all kinds of hard usage.

2d. No breaking of threads in going over seams.

3d. No imperfect action of the feed at uneven places in the work.

4th. The Weed-stitch catches of itself, and will sew from the finest lace to the heaviest leather, and 20 cotton to coarse linen thread.

5th. The Weed Machine will do beautiful quilting on the bare wadding, without using inner lining; thus leaving it soft as if done by hand.

6th. The variety of fancy work that can be done on the

WEED MACHINE,

with so little trouble, makes it equal, if not superior, to six machines combined; for instance, it Binds, Hems, Tucks and Sews on the band at the same time, and in face, the

WEED NO. 2 MACHINE,

as before stated, is equivalent to a combination of any six ordinary machines.

Orders for Machines may be sent through the American Advertising Agency, 389 Broadway, N. Y.

Below we give a few prices:

No. 2. Oil Black Walnut, Ornamented with Hemmer.	$60,00
No. 2. Oil Black Walnut, Hall Case, Ornamented, with Hemmer.	65,00
No. 3. Extra Oil Polished Black Walnut, Half Case, Large Table beautifully Ornamented.	75,00

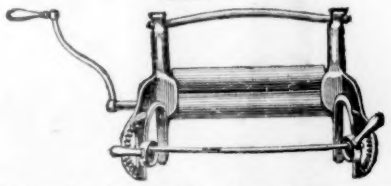
WEED SEWING MACAINE Co.,

136) 506 Broadway, New York

PUTNAM'S CLOTHES WRINGER.

IT IS THE ONLY RELIABLE

Self-Adjusting Wringer.



No Wood-work to Swell or Split. No Thumbscrews to get out of order. Warranted with or without Cog-wheels.

It took the First Premium at Fifty-seven State and County Fairs in 1863, and nearly double that number in 1864, and is, without an exception, the *best* Wringer ever made. Patented in the United States, England, Canada, and Australia. Agents wanted in every town, and in all parts of the world. Energetic agents can make from $5 to $10 per day.

WHAT EVERYBODY KNOWS, VIZ.:

That Iron well galvanized *will not rust.*

That a *simple* machine is better than a complicated one.

That a Wringer should be *self-adjusting, durable, and efficient.*

That thumb-screws and fastenings cause *delay* and *trouble* to regulate and keep in order.

That wood soaked in water will *swell, shrink,* and *split.*

That wood-bearings for the shaft to run in *will wear out.*

That the Putnam Wringer, with or without cog wheels, will *not tear the clothes.*

That cog-wheel regulators are not essential.

That the Putnam Wringer has *all* the advantages, and *not one* of the disadvantages above named.

That all who have tried it pronounce it the *best* Wringer ever made.

That it will wring a thread or a bed-quilt *without alteration.*

We might fill the paper with testimonials, but insert only a few to convince the skeptical, if such there be; and we say to all, *test* Putnam's Wringer. Test it *thoroughly* with *any* and any others, and if not entirely satisfactory, return it;

PUTNAM MANUFACTURING CO.—*Gentlemen:* I know from practical experience that iron well galvanized with zinc will not oxydize or rust one particle. The Putnam Wringer is as near perfect as possible, and I can cheerfully recommend it to be the best in use. Respectfully yours,

JOHN W. WHEELER, Cleveland, O.

Many years' experience in the galvanizing business enables me to indorse the above statement in *all particulars.*

JOHN C. LEFFERTS, No. 700 Beekman St.

NEW YORK, *January,* 1864.—We have tested Putnam's Clothes Wringer by practical working, and know that it will do. It is cheap; it is simple; it requires no room, whether at work or at rest; a child can operate it; it does its duty thoroughly; it saves time, and it saves wear and tear. We earnestly advise all who have *much* washing to do, with all intelligent persons who have *any,* to buy this Wringer. It will pay for itself in a year at most. HORACE GREELEY.

PRICES—$8, $9, and $10.

Sample Wringers sent, express paid, on receipt of price. Manufactured and sold, wholesale and retail, by

PUTNAM MANUF'G CO.,

13 PLATT STREET, New York,

BENNINGTON, Vt.,

CLEVELAND O.

WATER AND GAS PIPE.

The Boston Bituminized Pipe Company,

Are now manufacturing and prepared to take orders, for their PATENT PIPE, (from 2 to 12 inches in diamter,) as a substitute for Iron, Copper, Lead, &c., for the conveyance of WATER, GAS, SEWERAGE, &c. &c.

From the testimonials received, and the entire satisfaction it has given those having it in use, we feel warranted in claiming for this pipe over that of any other, the following advantages, viz.:

It is much CHEAPER—has great strength (it having been tested to 500 lbs. to the square inch,) combined with LIGHTNESS, costing less for transportation; the joints are easily made and perfectly tight; it does not expand or contract from different degrees of tempera ture, and is free from *CORROSION* or *CONCRETIONS* forming; does not impart any taste or injurious properties to water, and as far as anything can be said to be indestructible, we deem this to be.

As a GAS PIPE, we say it has no superior. The Lowell Gas Light Co., purchased and laid some of this Pipe last year, and have likewise subjected samples to a test of four month's duration in their dry lime purifiers, with the most satisfactory results, in fact establishing beyond a doubt, its perfect adaptation to the wants and requirements of Gas Companies, specimens of which, together with the statement of E. Cushing, Esq., Agent Lowell Gas Light Co., who made these experiments. I shall be pleased to show, and give all other needed information, by applying in person, or by letter, to JOHN L. WEBSTER, Treas.,

Boston Bituminized Pipe Co.,

127] No. 2 Pearl st. House, Boston.

AMBROSE SPENCER GILCHRIST.

(LATE CAPT. U. S. V.,)

CIVIL, MINING

AND ARCHITECTURAL ENGINEER,

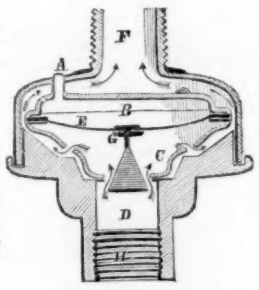
No. 200 BROADWAY, Office 12.

New York.

NOTICE TO GAS COMPANIES AND GAS CONSUMERS.

THOMPSON'S PATENT GAS CONTROLLER,

The only Self-Acting Gas Controller, Regulator, and Burner Combined which has ever been invented, or known to science.



THE PRINCIPLE UPON WHICH THE THOMPSON'S AUTOMATIC GAS CONTROLLER works is one well known to mechanics, and is simple in its operation.

Within the circumference of a small cylinder below the burner is placed a conical valve attached to a movable diaphragm. The diaphragm rises or falls as the pressure of gas from the pipe is lesser or greater, and the valve acts upon the valve-seat with such regularity of movement that in a difference of from five-tenths of an inch pressure to five inches the variation in flame is hardly perceptible.

The simplicity of its machinery and the nature of the material used in its construction insure its regular action and durability.

In consequence of the uniform quantity of gas which passes the Controller to the burner, there is no waste, and a steady, soft flame is produced, which is important to all who read, write, or work by gas-light. The unsteady flickering blaze which invariably exists when the pressure of gas is beyond the requisition for consumption, has injured the sight of thousands who have been subjected to it.

For street lamps these Controllers are especially valuable, because the pressure varies materially during the night, and in consequence there is a waste of gas, and the light variable.

Improvements have lately been made in the mechanism of the Controller which makes them almost a perfect meter to each ourner, and they are now offered to he public with more confidence than ever before.

Reference is permitted to the following named gentlemen—

Col. CHAS. ROOME, President Manhattan Gas Company, N. Y.
C. H. SAND , Esq., President Metropolitan Gas Company, "
J. H. ADAM, Esq., President New York Gas Company, "
PETER COOPER, Esq., Cooper Institute, "
JOHN A. DUFF, Esq., Olympic Theatre, "
GEO. H. KITCHEN, Inspector of Gas Meters, N. Y
A. L. BOGART, Esq., Gas Engineer.
Col. J. A. SABATTON, Engineer Manhattan Gas Company.
Col. A. J. WHITE, Engineer Metropolitan Gas Company.
J. K. SIMPSON, Esq., Engineer Cooper Institute.

Persons interested are invited to call at the Office, 28 Liberty street, where they can see the operation by pressure guage and test meters]

M. L GALLENDER, Agent
Office, 22 PINE STREET.

JOSEPH LEES, San Francisco, Agent for California and Oregon.

THE AMERICAN METER CO.

Organized under the General Manufacturing Laws of the State of New York

SAMUEL DOWN, President. HENRY CARTWRIGHT, Vice President. RICHARD MERRIFIELD, Secretary and Treasurer

Trustees.

SAMUEL DOWN, WILLIAM HOPPER, R. H. GRATZ, HENRY CARTWRIGHT, RICHARD MERRIFIELD.
THOMAS C. HOPPER, *Superintendent at Philadelphia.*

This Company is now prepared to furnish WET AND DRY GAS METERS, STATION METERS, GOVERNORS, PRESSURE INDICATORS & REGISTERS, SERVICE and METER COCKS, and all other articles in their line appertaining to the use of Gas-Works.

The combination of Mechanical and Scientific Skill, and the long experience of the several members of the Company, is a sure guarantee of durability, accuracy and excellence of workmanship. Orders addressed

AMERICAN METER COMPANY,

West Twenty Second Street, New York. Arch and Twenty-Second Streets, Philadelphia. No. 23 West Street, Boston will meet with prompt attention.

Harris & Brother, Practical Gas Meter Manufacturers,

Continue, as heretofore at their old Establishmen, No. 1117 CHERRY ST., PHILADELPHIA, to Manufacture

WET AND DRY GAS METERS, and all kinds of GAS APPARATUS, and furnish all articles appertaining to the use of Gas Works. ☞OUR WORK WARRANTED—Satisfaction Guaranteed. Orders respectfully solicted, and promptly attended to, by
HARRIS & BRO., No 1117 Cherry st., Philadelphia.

Messrs. Harris & Brother, Philadelphia Gas Works, February 14, 1857.

Dear Sirs;—I take great pleasure in stating that we have found your meters to register with entire correctness, and to be generally of very good quality—the number furnished by you to these works is over 5,000.
JOHN C. CRESSON, Enigneer;

Office of the Gas Light Company of Augusta, Ga., March 6th, 1858.

This is to certify that having used meters manufactured by Messrs. Harris & Bro., for the last nine years, we do not hesitate to state they have given entire satisfaction in point of wokmanship and accuracy of registration; they are surpassed by none, and equaled by few manufactories in the Union; we have used meters made by other establishments but our preference is in favor of those made by Harris & Bro., of Philadelphia, Pa.
G. S. HOOKEY, Superintendent of the Gas Light Company of Augusta, Georgia.

Messrs. Harris & Brother, Philadelphia. Philadelphia, March 4, 1858.

Gentlemen—We take great pleasure in bearing our testimony to the very superior character of the meters we have received from your establishment. We have always found the workmanshipall we could desire, while the accuracy and reliability of their measurement have always been satisfactory. We have used meters made by other parties, and none have given as entire satisfaction as those received from you. We are, gentlemen, very truly, yours, BIRKINBINE & MEARS.

Messrs. Harris & Brother. March 14, 1857.

Gentlemen—For the last ten years we have used in the Philadelphia Gas Works, meters made in your factory, and take pleasure in expressing my opinion to their correctness. On several occasions I have taken your meters apart, and found the material used in the manufacture of the same, to be as fine quality as is used in those imported from Europe, or made by any of the manufacturers in the United States. Respectfully Yours, GEORGE WIEGAND, Inspector of Gas Fittings, Philadelhia.

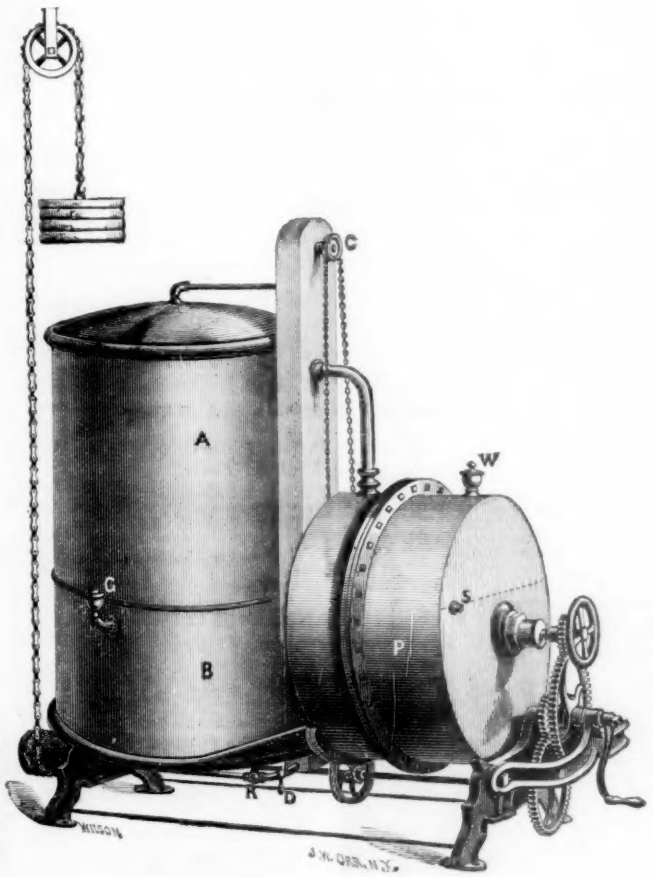
EMPIRE STATE GAS MACHINE,

LEVI STEVENS' PATENT, FOR SUPPLYING,

Dwellings. Stores, Factories and Public Buildings.

THE GAS GENERATED BY THIS MACHINE

Is a mixture of the vapor of hydro-carbon with common air. The mechanical devices employed are such as, from a long experience and critical examination into the nature of the element brought into use, seem best adapted to secure a certain and satisfactory result. GASOLINE, the liquid employed, is the more volatile portions of Petroleum, of a specific gravity of 0.6587. This liquid exposed to the action of this machine is vaporized, and a close mechanical mixture of the vapor with common air is effected. The value of the gas produced, its permanency, its illuminating quality, and freedom from liability to condensation, depend almost entirely upon the perfect and uniform character of this mixture. Hence the great importance of mechanical means adapted to secure all the conditions requisite in a Portable Gas Machine.



CASH PRICE-LIST OF MACHINES COMPLETE;

(Boxed and delivered on the cars at the Manufactory.)

No. 1,	$150,	5	Argand Burners.
do. 2,	250,	10	do.
do. 3,	350,	20	do.
do. 4,	450,	35	do.
do. 5,	600,	60	do.
do. 6,	1,000,	125	do.
do. 7,	1,500,	250	do.

This machine will produce the most brilliant and steady light without Fire or Heat, and is warranted to operate in every respect as represented.

The EMPIRE STATE GAS MACHINE is the most SIMPLE and EFFECTIVE MEANS KNOWN FOR PRODUCING GAS WITHOUT HEAT.

Its action is automatic, feeding itself with constant supplies of Gasoline, thus securing steady and uniform supplies of Gas. The gas produced is equal to the best known Illuminating Gas. It is as economical as any other, and is adapted to a wider range of use for Lighting, Heatin and Mechanical purposes. It will maintain its illuminating power under as great a degree of cold as any other. It is free from danger with the ordi nary care in using gas. Its remarkably pure and steady' ght is pleasant for the eye. It renders it easy for persons living remote from street gas pipes to enjoy the luxury of a pure GAS-LIGHT, at a COMPARATIVELY SMALL COST, AND WITH LITTLE TROUBLE.

☞ The public are invited to witness its operations at our store. GASOLINE will be supplied by us, at market prices, or may be obtained from the various other sources of supply now going into operation.

MITCHELL, VANCE & Co., 620 Broadway, New York,

Manufacturers of Chandeliers and Gas Fixtures of every description. Also, Chandeliers, Brackets, Lamps, &c., for Coal Oil, adapted to Churches, Public Buildings, Dwellings, &c.

Brevities.

—In Lieperville, Penn., there is a quarry so deep that when a teamster calls to his oxen a spectator on the bank hears nothing. A stone cast from the same bank occupies thirteen seconds in descending.

—Crude petroleum is being extensively used in western New York for the destruction of insects on trees. It was found that the acids of refined petroleum were injurious to the trees themselves, but crude is harmless and has the desired effect in permanently destroying the vermin.

—About $300,000 in gold dust reached St. Joseph on the 23d ult., in the hands of passengers from Montana.

—Paper socks are now being made by a patent process lately invented. The process is somewhat similar to Lockwood's method of making paper colars, being a combination of a very light web of muslin and a body of paper.

—A horizontal water wheel, manufactured at Lancashire, though only three inches in diameter, is equivalent to one-man power.

—The railroad authorities of St. Louis have determined to construct a tunnel under the Mississippi river at that city. Consent to construct the work will be asked of Congress at once. The cost is estimated at $3,000,000, and the time required for the completion of the work three years. The tunnel will not be more than three-quarters of a mile long.

—Petroleum seems to be widely spread over the earth, or rather under it. The *Taranki Herald*, a New Zealand paper, states that oil has been struck there at 60 feet. It is also stated that 5,000 gallons were obtained daily, and that £10,000 had been offered and refused by the six working men who started the enterprise. The Melbourne *Argus* also informs us that petroleum has been found on the Coorang, in South Australia.

—It is more than hinted that certain parties have discovered a veritable diamond mine somewhere in the vicinity of the Table Mountains, to the west of Mesilla Valley, California. Specimens shown to various parties have been pronounced genuine by those engaged in the diamond trade in San Francisco. Diamonds have been found at Cherokee, and it is not improbable they have been discovered elsewhere. The exact locality of the discovery has not been revealed.

The San Francisco *Mining and Scientific Press* says that a combination of capitalists in that city have obtained control of the entire quicksilver interest on that coast, and have advanced the price of that commodity fully twenty-five per cent., which the miners will have to pay so long as the monopoly is kept up, or until other productive mines can be found.

The Gold Yield of Australia.—Notwithstanding an extraordinary drouth, and consequent scarcity of water for mining purposes, the productiveness of the Australian gold fields does not appear to have been checked. The reports of many of the companies show but little falling off. The Custom House returns of the exports for the first six months of the year, give 1,648,293 ounces. The quantity for last year was 1,725,000 ounces.

A Barricade of Icebergs.—The captain of the ship Echunga, which arrived at London three weeks ago from Otago, New Zealand, reports that in latitude 61 S., longitude 97 W., he saw about ninety large icebergs which formed a complete barricade across the ship's course as far as the eye could reach from the masthead; the vessel stood to the northwest for two days, then tacked and stood to the eastward, and saw no more ice.

—The total coal consumption of Philadelphia in 1865 was 1,439,297 tons. The rule is to estimate the consumption of coal for domestic purposes at one ton for every unit of population; and as the population of Philadelphia is about 720,000, the *American Mining Register* puts down the coal consumption of that city for manufacturing purposes, at about the same as the consumption for domestic uses.

R. L. DELISSER & CO.,

DEALERS IN MINERAL LANDS

—AND—

PATENT RIGHTS,

No. 69 Beaver St., NEW YORK.

152-176

WILLIAM ELTING

Manufacturers Agents for the Sale of

PORTABLE AND

Stationary Steam Engines,

BOILERS AND MACHINERY,

No. 95 Liberty-St, NEW YORK.

☞ Leather and Rubber Belting supplied at usual rates. Circulars sent on application. 55-78

MOREY & SPERRY,

Manufacturers of

HEPBURN & PETERSONS, AND BEATH'S

Amalgamators, Stamp Mills,

Quartz Crushers, and other

MINING MACHINERY.

Also Agents for

Foundries in San Francisco, Cal., and are prepared to make time contracts to erect Mills completed, on the premises in California, Nevada and other Territories.

Office No. 95 LIBERTY ST., Rooms 10 & 11.

152-176 **New York.**

A. HITCHCOCK,

Inventor and Manufacturer of the

Cam Quartz Breaker and Pulverizer,

REVERSIBLE ROLLER MILL,

IDAHO MILLS & AMALGAMATORS,

Adapted to All Kinds of Power.

Unequalled for utilizing power—avoiding friction and wear,—rapidity of work, and facility of transportation and adjustment. Also, **Hitchcock's Adjustable Tubular Flue-cleaning Boiler,** and other valuable Patents, for which license to manufacture will be granted on reasonable terms.

Circulars furnished on application.

53-76 *Office No. 4 & 6 Pine Street, New York.*

GEO. H. BRONSON,

132 Maiden Lane, New York,

Dealer in

Paraffine Machinery Oil,

From Pure Cannel Coal, adapted to all classes of

Stationary Machinery, Locomotive Engines, Railroad Cars, Woolen Factories, Cotton Spindles, Sewing Machines, &c.

Paraffine Wax and Paraffine Wax Candles. Also the best brands of Burning Oils. All Oils guaranteed to answer the purpose for which they are recommended.

57 80

D. E. GRAY,

DEALER IN ALL KINDS OF

INDIA RUBBER GOODS

Vulcanized Machine Belting,

Conducting, Hydrant, and Engine Hose,

GUM STEAM PACKING,

Amidon's Improved Clothes Wringer,

And all kinds of Useful and Fancy Rubber and Vulcanite Goods,

No. 201 Broadway,

Middle of the Block between Fulton and Dey Streets, NEW YORK.

WILLIAM S. CARR & CO.,

Successor to Sawyer & Co.,

SOLE MANUFACTURERS OF

Carr's Patent Water Closets,

URINAL VALVES, &c.

Also Manufacturers and Dealers in PLUMBING MATERIALS OF EVERY DESCRIPTION, Plumbers' Brass Works, Earthen Ware, Pumps, Iron Drain Pipes, Traps and Sinks, Copper Bath Tubs, Showers, &c., &c.

OFFICE AND MANUFACTORY

149, 151, 153, 155, 157 Centre Street, cor. Canal,

NEW YORK.

Illustrated Catalogue and Price List sent on application.

152-176

THE WOODWARD

Steam Pump Manufacturing Company,

MANUFACTURERS OF THE WOODWARD PATENT IMPROVED

SAFETY STEAM PUMP,

—Adapted for Mining and Fire Perposes—and

Steam, Water & Gas Fittings of All Kinds.

Also, Wholesale and Retail Dealers in WROUGHT IRON PIPE, BOILER TUBES, etc.,

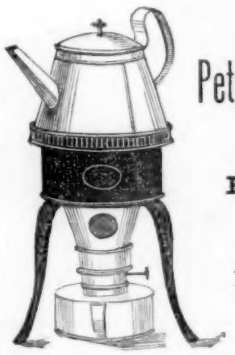
Woodward Building, 76 and 78 Centre St.,

Corner of Worth Street, Formerly 77 Beekman Street, *New York.*

53 GEO. M. WOODWARD, Pres't. 64

CHARLES H. REICHMANN,

Manufacturer and Jobber of



LAMPS,

Petroleum Stoves, &c.,

AND IMPORTER OF

Porcelain Shades,

WICKS, &C.,

No. 45 Fulton St.,

[Bet. Pearl and Cliff]

NEW YORK.

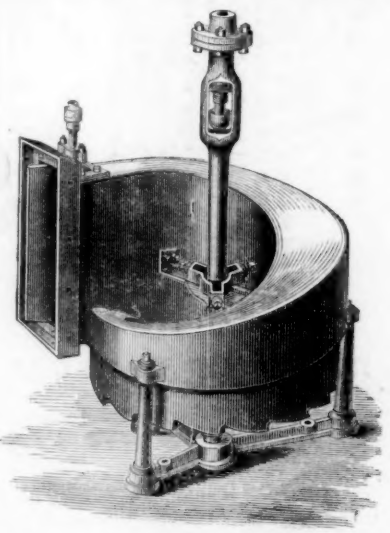
ALL ORDERS promptly filled for his Patent Petroleum Stoves or Lamp Heaters, which are acknowledged to be superior to any other article of the kind now in use, as regards economy in consumption of oil, as well as simplicity of construction.

These Cooking Apparatus are used like any coal oil lamp, being provided with a sheet metal chimney, in consequence of which they burn without odor or smoke. They radiate no heat into the room, and are therefore very desirable in hot weather.

Also, Nursery and Night Lamps combined, a superior and cheap article for nursery or sick room; has a kettle, cup and pan, complete.

STEVENSON'S

Helical Jonval Turbine Water Wheel,



For first-class mills and factories where great economy of water and simplicity and durability are required.

Manufactured by the Patentee,

J. E. STEVENSON, Hydraulic Engineer,

40 Dey Street, New York,

☞ Stevenson's Jonval Turbine Water Wheel gave the highest per centage of power over all others at the trial of Water Wheels at Fairmount Works, Philadelphia, March 9th, 1860. Nineteen wheels were tested. The only practical test on record.

Also Manufacturer of

Gang, Muley and Circular Saw Mills,

SHINGLE AND LATH MILLS,

Of the very best quality. **STEAM ENGINES AND BOILERS** especially adapted to Lumbering purposes.

FOR SALE—Portable Flour and Grist Mills, Water Wheel Governors, Rotary, Hand and Power Pumps, Circular Saws, Rubber and Leather Belting.

Lester's Improved Mechanical Oil for lubricating purposes.

53-76

AUG 2, 1866.